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Address.

THE SHOEMAKER AND HIS LAST.*

By E. H. Bradford, M.D., Boston.

If the adage is to be followed with safety, the shoemaker sticking to his last should make sure that the latter is suitably shaped.

Today this is difficult, as lasts are the product of the manufacturer, who furnishes them by the thousands, modelled each year according to the dictates of style and not anatomy. As is the case with the corset, the wearer of the shoe is to an extent the slave of the tyrant, fashion. If he or she desires emancipation, there is no escape from the stigma usually attached to eccentricity.

The manufacturer must follow the market, and the latter is the expression of the uninformed public, which seeks adornment provided the resultant distress is not too great.

The modern manufactured shoe can be worn in ordinary use without immediate discomfort, and the resulting disabilities are so gradual in their development that the shoemaker may escape blame as the cause of later ills usually attributed to inherited traits or rheumatic tendencies.

The foot of the young, like many other organs, can bear much neglect and ill-treatment without complaint from the wearer, ignorant of the results of continued abuse, but if the question of unwise shoeing is looked at broadly and the effects upon human efficiency are considered, the subject becomes an important one.

It is difficult to over-estimate the amount of disability caused in our urban and suburban communities by modern shoes so great is the number of the crippled, and to anyone whose attention has been called to the subject for the last forty years it is apparent that deformities are now prevalent which were formerly uncommon and but little known. On the other hand, ~~some~~ deformities formerly common among men are less frequently seen than a decade ago and it is not unreasonable to expect that with increasing general knowledge of the subject, the ill effects of manufactured shoes will be materially lessened. There is great intelligence exercised and energy concentrated in the manufacture of shoes, and though some of the anatomical and physiological facts in regard to the human foot are not generally known by shoe manufacturers and dealers, they are of a nature which can be comprehended without difficulty if properly presented. Even stylish ladies' shoes can be made to be much less harmful than they are at present, and the walking shoe of men can be made nearly as comfortable as a moccasin if proper thought and common sense are applied to the subject.

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* Read at a meeting of the Surgical Section of the Suffolk District Medical Society.

The attention paid by the Government in developing the army shoe has been of the greatest importance in this direction in educating the public and the manufacturer; but the result of this investigation of the subject should not end with the war and be limited to the comparatively small number of soldiers, but should be extended to the consideration of the footwear of the American people.

At first sight, the problem seems a simple one, and to the barbarian and the mass of toiling mankind, regardless of the appearance of footwear, little thought need be expended on the shape of foot covering; but communities which have passed the barefooted, the serf, and peasant stage of social development, look for something more than the mere matter of protecting the foot from wet and cold or injuries unavoidable in rough locomotion.

When the shoe becomes, instead of footcovering, one of the habiliment and an article of ornamental dress, the question becomes more complicated, not only as it is necessary to consider the varying fancies of individuals and periods but also because of the different shapes the foot, like the hand, may assume according to the uses to which it is put. Foot gear which fits the foot under certain conditions will be too tight under others.

The boot of the burden-carrying laborer needs to be broad, as the foot needs to spread to its capacity in its work of sustaining weight. The slippers of the dancer can be narrow, as in the spring of the "light fantastic toe" the front of the foot can be bound in one implement of energy instead of five independent digits of propulsion and support.

It is for the reason of the unusual adaptability of the foot to the different functions of locomotion that shoes varying in shape from that needed for the full use of the foot can be worn with little or no discomfort in standing or an easy gait.

The Chinese lady's distorted foot illustrates with what a small part of the foot locomotion, and even comparatively active locomotion, is possible. Shoes can be worn in an ordinary gait with little or no discomfort which cramp half the normal functions of the foot.

Trouble comes when the shoe limiting a certain function of the foot is used for a portion of the step or for a manner of gait needing that especial function. When the front foot walker wears a heel walker's shoe, the cramped muscles are injured or strained as would the hand of a piano player be if wearing a snug-fitting glove or the writing hand if the fingers are restrained by even a lightly constricting elastic band. The evil done by the ill-adapted shoe may be unnoticed in its gradual progress, painless, and limited to the weakening and atrophy of muscles, particularly those which may be termed the thumb muscles of the foot, so important and useful among the barefooted. There may be, and not infrequently is, a definite displacement of some of the many bones of the foot with, in addition, shortened and disordered ligaments, creating a distortion which may become permanent and crippling.

Not only should every physician know of these disabilities and the measures needed to prevent them, but every manufacturer and shoe dealer also, as well as all thoughtful shoe buyers. To anyone examining the shoemakers' last, even those manufactured from well-considered designs like those used for the army shoes, the purpose of its shape is not clear. The shoe manufacturer may well claim that the practical shoemaker knows better than any doctor what shaped shoes the public wants, and that in view of much conflicting advice from physicians, the shape of the last must be left to the manufacturer, who also possesses the technical knowledge needed in stretching and stitching the leather attaching the sole to the upper and providing for as shapely a shoe as is needed.

On the other hand, the surgeon whose attention is directed to the various well-recognized shoe deformities, developed gradually and painlessly after the wearing of different types of shoes, is able to inform the community what types of shoes are undesirable or suitable only for certain kinds of locomotion. This knowledge is also eventually helpful to the shoe dealer, who though desiring only to sell his goods and not informed as to the ultimate results in weakening and distorting the foot, is anxious to obtain information which will enable him to give sensible advice to his customers.

Occasionally enterprising manufacturers, under the advice of a physician, will construct a shoe made from a plaster cast of the foot, forgetting that it is not the shape of the bare foot with its fatty and muscular tissue which needs consideration, but the action of the skeletal form, —that is, the play of the bones in action. If this is not properly considered, the foot is hobbled; if it is, a shapely shoe may not be injurious.

It must always be remembered that the shape of the foot changes at the different stages of the step and that any hampering of these changes is ultimately injurious to the strength of the foot of those active on their feet, even though the wearer suffers no pain and may be unconscious of disability.

All shoe dealers know that pointed-toed shoes, crowding the toes, are not as good for the feet as broad-toed boots with adequate amount of room, and that the sole cut with a straight line on the inner edge is nearer the natural foot form than if the shape of the shoe forces the end of the great toe outward. But an almost equally important defect in the shape of the last is rarely considered.

If the articulated bones of the foot are placed in the normal position of the weight-bearing foot of a standing individual, it will be seen that the inner side of the foot from the ankle to the toes is much higher than the outer edge. The latter lies flat along the whole length of the fifth metatarsal.

Lasts, however, are flattened to a noticeable distance back of the ball of the foot and are frequently even hollowed down in this section. When the upper, shaped on such a last, is stitched firmly upon an unyielding sole, the resulting shoe exerts a downward pressure upon the front half of the first metatarsal, *i.e.,* on the inner side of the foot.

When the patient stands upon the foot in such a shaped shoe a faulty attitude is favored. An inward sag of the ankle developing a knock-ankle position results. This position throws the foot out of the best weight-bearing alignment and favors the development in time of plano-valgus or flat-foot. Shoes made on such a last have the advantage, as seen by the shoe dealers, of avoiding the development on wear of disfiguring folds and wrinkles of the front part of the upper. This, however, is of negligible importance in working shoes, which should give ample room for the proper weight-bearing position of the tarsus, which is not to the inner side of the mid-line of the foot.

The flattening of the front of the last has another disadvantage. The free action of the toes and the toe clutch is impeded, as the heads and upper ends of the metatarsals are bound closely down to the sole, preventing normal flexion, keeping the proximal digits hyperextended, with flexion of the terminal digits as a result of the over-stretching of the flexis toe muscles.

The foot, pressed forward in the boot by the act of walking, is checked as it slides forward by the flattened upper and in time a humped-shaped dorsum of the foot may be developed, with a claw-like distortion of the toes.

This condition is favored by the unyielding cross seam frequently found in shapely boots and shoes stitched across the metatarsals.

Another common defect in the last is in shaping the sole with a long arch extending forward to the ball of the foot. This acts still further to throw the toes out of the action of flexion and also weakens by pressure the strong muscles of the sole of the foot.

A boot made small and flat in the waist from a faulty shaped last favors the development of what is termed the flattening of the cross front arch of the foot,—that is, the flexible arch of the heads of the metatarsals, found in most positions of the foot. As a result the greatest pressure of the backward-driving foot does not come upon the ball of the great toe and its strong digit but upon the smaller and less fat-protected third and fourth metatarsal heads, causing uncomfortable callous places in the middle of the front of the sole.

While the foregoing does not exhaust the list of defects of the manufactured last, it will be sufficient to indicate the need of more careful consideration in shaping it.

The ultimate evil results of badly shaped lasts upon the feet of the shoe-wearing public is not found, as is often supposed, only among the thoughtless devotees of style in foot wear. They are common also among the working class, who, knowing nothing in regard to the proper shape of footwear, buy anything furnished them which can be worn without immediate discomfort in their ordinary avocations, which do not usually tax to any great extent the muscles of the sole of the foot. These gradually become weakened, permanent distortions follow, and an incurably crippled old age results and an enfeeblement of working efficiency.

A working man or woman, limited in the ability to stand continuously without wearying foot ache, is deficient in working effectiveness.

The extent of this limitation among the working classes, if incalculable, is certainly much greater than is generally supposed.

Accurate statistics are wanting as to the amount of foot disability brought to light in the last draft, but there is no doubt that this is distressingly large. Much of this was unquestionably remediable by improvement in footwear and the exercises incident to drill.

The following instance is illustrative:—A healthy enlisted man, attached to a battalion of the regular troops stationed at one of the forts in Boston Harbor, found himself unable to drill without severe foot pain. The surgeons in charge could find no abnormality in shape or motion of the foot. He was unjustly considered a slacker by both officers and men, a charge which he indignantly resented, but as he was healthy and well-made, was difficult to disprove.

A special examination showed that, while the foot was well shaped and, there was no paralysis, a noticeable lack of strength in the plantar muscles was present from previous shoe cramping. The young man after enlistment had been given clerical work for several weeks and then, without gradual training, had been put to hard heavy gun drill for several hours' continuous standing daily. He became completely incapacitated, was transferred to the hospital and only escaped discharge from the service by the special effort of the surgeon-in-charge, who personally arranged for graduated daily exercises developing the plantar muscles with limited and gradually increasing service. Three months' time was needed before active service was possible.

The number of cases of unnecessarily weak feet, grading from those without distortion to those of mild grades of knock-ankle, up to those suffering from crippling flat feet, was recognized as large by all physicians active in draft board examinations; and if it is remembered that those presented for examination represented only the able-bodied and younger men of our community, an idea can be formed of what the condition of the feet of the feebler, the older men and of the women may be. Certainly the rule of manufactured shoes and the control of last and shoe makers exacts a heavy toll of disability on the American public which is unnecessary and preventable.

The shoe industry in this country is not only well organized, but is highly intelligent, and if its interested attention is turned to the subject, can readily provide for the proper modification of the shape of the last. This does not demand the manufacture of ugly or odd shaped shoes, but does demand a proper recognition of the fact that the foot is not a block of substance which must be held to a certain shape, but is a complex implement of locomotion whose functions should be safe-guarded, and these functions vary with the service demanded in different occupations.

A stylish boot can be worn as desired when style is needed, but a suitable working shoe should be available for the wear of everyone for hours of active service and the foot should be freed from compression in the leisure hours by the wear of moccasins or loose foot gear.

Abuse of the feet is appallingly great. The constant use each day, morning till bedtime, of constricting, hampering boots is much too common. The evil result of all-day use of tight gloves is evident, but no one considers that the feet have equal rights which all men should be bound to respect. In fact, a campaign for the emancipation of the human foot, the most abused part of the human body, not even excepting the digestive apparatus, is much needed in America, the land of manufactured shoes. The Oriental, even the Chinese, who foot-bind only selected females, might well look upon the urban American with derision for the folly of their mutilation of an important and useful part of their anatomy.

Shoe dealers entertain a fear of injury from shoes which are too short or which, not checking the forward slipping of the foot in the shoe, cause flexion of the toes. An elaborate mechanism and system was developed to prevent this in fitting the army shoe.

In attempting to obviate this evil it is, of course, undesirable to create others.

The check to the forward slipping of the foot cannot without injury be placed upon the middle of the front of the foot. It should be placed upon the firmer part of the tarsus and lower end of the tibia, as in the old army brogan or in the old fashioned boot. Furthermore, if free action of the toes is allowed, as is needed in the toe clutch and backward toe drive at the end of the step, crumpling of the toes does not develop as a deformity as is the case where the attempt is made to hold the toes down by flattening the upper over the ball and waist of the foot.

Moccasin or sabot wearers walk without checks to the forward sliding of the foot; but the resulting foot is much less deformed in the toes, which have enjoyed ample room for muscular play and developed strength, than is observed in the usual manufactured shoes, which develop so commonly humped feet, flattened transverse arch, hammer and claw toes, not because the boots are too short but because they are unscientifically shaped.

The surgeon who treats foot deformities is undoubtedly unqualified to consider the trade demands of the shoe manufacturers, but he is justified in urging that the shoe last should have a proper resemblance to the shape of the normal foot and to its needs in action. It is manifestly the *reductio ad absurdum* of shoe fitting to attempt to obviate the resulting defects from shoes which are too flat, by fitting them too wide and several inches too long.

It is to be hoped that the study and thought which have been expended in considering the shaping and fitting of the shoes for Army use in the great war may lead to a more careful consideration of the sale and manufacture of shoes in civil life, to the furnishing of good looking shoes which are not injurious, and working shoes which are not crippling. If the American nation has poured out its treasures to free the world from the domination of autocracy, should it not be able to emancipate the human foot from the thraldom and bonds of ill-shaped shoes and the tyranny of the faulty last?

Style dominates costume, but the surgeon may well ask for workers a supply of shoes which, if not conforming to the natural shape of the foot, at least do not cripple it.

The manufacturer and shoe dealer should realize that, with a thoughtfully constructed last, shoes can be made which will not hamper too much the play of the toes and yet not be unsightly to an unmarketable degree. For such shoes it is of importance that the inner side of the last, well down to the line of the base of the toes, should be higher than the outer, the first metatarsal should not be pressed down to the plane of the fifth metatarsal, the tread of the sole should be broad, and the waist of the shoe should not be so tight as to limit the flexing of the toes within the shoe or the downward and inward play of the great toe and its metatarsal when, in standing or sitting, weight comes on the front of the foot.

For any satisfactory improvement in the foot gear of our community, it is evident that the purchasing public should be fully informed as to the essentials of footwear.

For those to whom strength of foot is not necessary and the style of shoes is of importance, there can and will be no lack of well supplied shops, but there should be furnished for those who need unhampered feet in standing and walking in their vocation, shoes that do not weaken or cripple, to be worn in their working hours.

It is to be hoped that the war service may be able to call to the attention of the community the extent of the error of foot cramping. The energetic effort of the United States Government to develop a good service boot resulted in the development of a barrack shoe which was not unsightly or clumsy and was comfortable. An examination of the shape of the last and a comparison with the articulate bones of the foot shows that a better-shaped last could have furnished a better boot which would have obviated much of the difficulty met in fitting the army shoes. This was even more true in the service or trench boot.

Old-fashioned boots, made with the front and sides of the uppers cut out of one piece, became shaped in wear to the needs of the foot. The same was true of the loose, unlined army brogan laced around the ankle and not stitched down across the middle of the metatarsal bones, or with the lacings cut so that the leather stitching or wrinkled lining crowds and rubs the head of the first metatarsal.

When these defects are noticeable even in boots made, like the Army boot, with a careful consideration of the needs of the foot and yet without a full comprehension of the anatomy of the skeletal foot and its needs, it is unnecessary to consider what faults are to be found in shoes made only for style.

* * *

INFLUENZA MORTALITY RATE IN SAMOA.—A recent report from Apia, Samoa, states that since the beginning of the influenza epidemic there have been 38,173 deaths, including 3265 men, 2704 women, and 1574 children.

Original Articles.

SOME OBSERVATIONS ON THE CHEST DURING THE INFLUENZA EPIDEMIC.*

By Philip H. Cook, M.D., Worcester, Mass.,

Roentgenologist, Worcester City and Memorial Hospitals.

The present pandemic of influenza has given the medical profession a wonderful opportunity to study affections of the chest from every angle and in infinite variety; if there be a bright side to the scourge which has recently been characterized by medical writers as the worst since the Black Death of the Middle Ages, it is this.

In this study the roentgenologist has endeavored to bear his part; the men at the Army camps, tackling the job with skill and enthusiasm with an abundance of material, and the carte blanche of the Government as to equipment and supplies, obtained a mass of informtion probably never before equalled. Frank acknowledgment is made by the present writer to Capt. Ernest L. Davis of Camp Dévens, whose wonderful study of more than 1200 cases inspired him to undertake the present work at the Worcester City Hospital.

Since Nov. 1, every case of influenza which showed complications has been systematically radiographed, mostly at ten day intervals, and whenever possible the plate has been viewed in consultation with the representatives of the House service in charge of the patient.

A series of virulent cases was studied early in the epidemic by Dr. Selby of Washington, using a bedside apparatus to avoid disturbing the patient. Most of these began with some infiltration about the hilus of one lung; a day or two later, a faint shadow appeared in the lung tissue itself, resembling pneumonia in density, but unlike it in distribution; in another day or two the same appearance was presented in the other lung, while the physical signs of the cases remained only those of a severe bronchitis. Autopsy on the fatal cases showed the shadow to be due to actual hemorrhage into the lung substance.

The most frequent and serious complication is pneumonia. Our conception of this disease used to be of a lesion originating at the root of the lung and progressing outward till its arrival at the periphery made it possible of recognition by physical signs. Within the past few years, however, the ray has shown that this is not usually the case. The typical patch of consolidation appears at the periphery of the lung and progresses inward, forming a triangle or truncated cone, before it can be diagnosed clinically. When the process reaches a bronchus sounds are transmitted, and the physical signs appear. The affected area may be sufficiently dense to suggest fluid, or merely translucent. Some cases begin as small patches of consolidation about the hili and primany bronchi; later the patches coalesce into the lobar type. A remarkable feature of the study at Devens was the 10% of their large series which, with all the clinical signs of pneumonia, and with the enlarged heart and high diaphragm characteristic of the roentgen picture, shows no consolidation during the entire course of the disease, indicating the strong part played by toxemia as compared with lung involvement, in producing the symptoms.

Other signs noted in pneumonia are streaks running from hili to apices (believed due to vascular congestion), high diaphragm on the affected side, and cardiac enlargement. This cardiac enlargement persists long after all clinical and radiographic signs in the lungs have disappeared, and the patient has returned to his regular occupation. We have not had the opportunity to follow such cases through, but Camp Devens and the Boston City Hospital have attempted it. In the B.C.H. cases the symptoms persisted so long that the medical and executive staffs refused to continue sending the patients for examination, on the ground that they were clinically fit for discharge; Camp Devens found it to last for from four to eight weeks after leaving the hospital, with the further observation that for the first three weeks after resumption of duty there was a gradual increase in size, suggesting dilatation under strain. The clinician may well give thought to this observation in the management of his convalescents.

The work at Camp Devens brought out another interesting clinical point in a class of cases which would never reach the non-military roentgenologist. The patients (mostly officers) had the symptoms of an acute bronchitis—malaise, cough, slight fever, not sufficient to interfere with their daily duties. The plates showed, in a large number of instances, many small foci of peribronchial density, mostly in the lower lobes, a true broncho-pneumonia.

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* Read before the Worcester District Medical Society, Feb. 13.

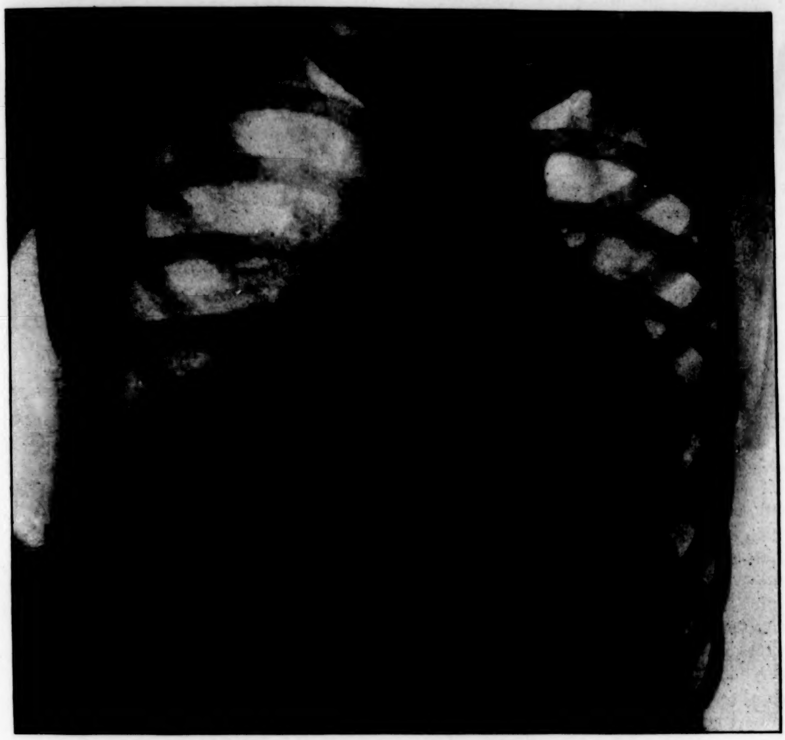

Fig. 1.—Pericardial effusion following influenza.

The resolution of many pneumonia cases is slow. Some develop into frank empyemata; others eventually clear up after passing through a stage which, from the roentgen standpoint, is hardly to be distinguished from tuberculosis. Kennon Dunham has proved that the characteristic markings of this disease are produced by the laying down of connective tissue in the parts of the lung affected; similarly, the profuse exudate of the influenza form of pneumonia, both in lung and pleura, undergoes fibrosis, producing a picture so like tuberculosis that the diagnosis of the latter disease is entirely unsafe unless it can be shown that the patient has not recently had an influenza pneumonia.

This young colored boy, Fig. 1, had double influenza pneumonia several weeks ago. He was sent into the hospital with diagnosis of fluid at left base. The roentgenogram shows no fluid present, but an enormously enlarged cardiac and mediastinal shadow. The heart sounds are reported to be normal but faint. The opinion was expressed that pericardial effusion was present. Notice presence of C-H angle. Several diagnostic taps proved negative. The apparent signs of fluid in this case were probably caused by compressed lung.

Since the first picture the clinical picture has improved. The boy is better, but still runs some temperature. This picture (two weeks later) shows the left border of the heart to have receded considerably. In the original plate the left border shows the double shadow of heart and pericardium which is considered diagnostic. The right border is not as well defined, perhaps, owing to the thickening left in the lower lobe by the pneumonia process. The breadth of the mediastinal shadow is unchanged. Capt. Ernest

Hunt, now on the Pathological service at Camp Hancock, informs the writer that he has autopsied several fatal pericardial cases in which he found the mediastinal structures in a condition of brawny oedema, thickened and bulging beyond their limits. This may account for the appearance here shown. Capt. Hunt further states that in some of these cases diagnosis was made by a small trephine opening in the sternum, through which the pericardium was nicked.

We come now to the subject of fluid in the chest. In the present epidemic this serious complication appeared with great frequency and very early in the disease. In the army camps it was probably the most serious problem with which the surgical staff had to deal, for in the great majority of cases the effusion soon became purulent. In our series a surprising number were marked by absolutely contradictory physical signs. Time and again bronchial breathing and normal or increased voice sounds were reported by our best medical staff men over areas later shown to be occupied by effusion. It is, fortunately, in this very class of cases that the roentgen ray is of the greatest assistance in diagnosis and in the control of treatment.

Effusion appears on the roentgen plate as a shadow of uniform density, either in the axilla, with a curved border suggesting the famous S-curve of Ellis; or encapsulated, but still distinguishable from pneumonia by its uniform character and sharply defined border; or covering an entire side of the chest, especially if the fluid is free and the patient in the prone position; or, finally, when a diagnostic tap has admitted air and the picture is taken sitting, the definite fluid level is clearly shown. The single exception is in the presence of pneumonia. Here, even with the assistance of the sitting position, a small effusion is readily missed. The reason for this is believed to be that the lung, consolidated by the disease, is not readily displaced but presses the fluid out into a thin layer between itself and the chest wall, so that, with the increased density due to the pneumonic process, diagnosis is not easily made.

Among the points of assistance rendered by the roentgen examination may be mentioned the detection of abscesses or newly formed pockets of pus; of the re-accumulation of fluid; showing the reason for the inefficiency of drainage either by reason of the tube not reaching the pus cavity or extending above the level of the fluid therein; and observing the expansion of the lung during convalescence.

This man, Fig. 2, was admitted to the hospital in October. Following pneumonia, the first plate showed effusion practically filling the chest. Several taps were made, all proving dry. A lateral plate was then taken which showed the effusion in the posterior half of the chest cavity. Following this a rib resection was done, which opened into a cavity between lobes, walled off by adhesions; still no pus was found. Two days later the pus burrowed through to the thoracotomy wound and drainage was established. The later plates show the pus free, with the characteristic horizon line of the pyo-pneumothorax, and the level subsiding each time, but still remaining at a considerable height. This case well illustrates the extraordinary difficulties of diagnosis and treatment sometimes encountered in this class of case. The presence of firm adhesions between lung and pleura probably accounts for much of it.

The later course of this case may be of interest. Improvement was slow, and early in March a stereoscopic roentgenogram showed a cavity at the right base posteriorly, estimated to be nearly as large as the head of a newborn child. Next day it was opened by stab wound under right scapula, and 4 ounces of very foul smelling, dark brown purulent material evacuated. A probe showed the cavity to be a little over 3 inches deep. Bronchial communication of large size was shown by the withdrawal of air bubbles with the fluid. Irrigation with Dakin's solution was started next day, and it was found possible to collapse the cavity entirely, the bronchial communication apparently closing as the last of the solution was withdrawn at the end of the operation. This fact was confirmed by roentgen examination four days later. The Dakin irrigation was done three times daily, and at night 1 ounce of 2% formalin-glycerine was injected and allowed to remain over night. Negative pressure was maintained between dressings by clamping end of drainage tube with hemostat.

The laboratory report on fluid from cavity shows streptococci in long chains (pure culture). Five days later no growth on culture was reported and irrigations were stopped. Later recrudescence of purulence forced resumption of technic for a while, but by April 10, culture was again negative and discharge very slight (three weeks after operation). The wound soon closed

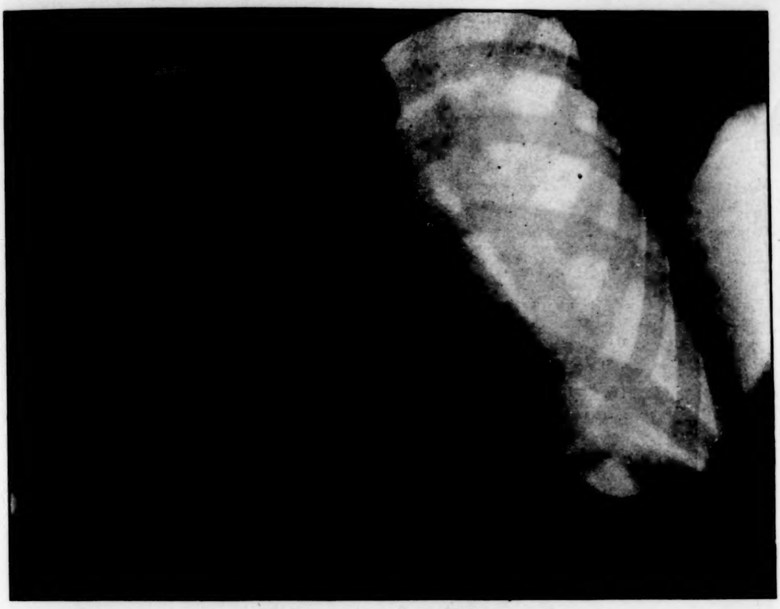

FIG. 2.—Large Empyema which eluded diagnostic taps.

and the patient left the hospital. The treatment of this case has been reported in detail because it represented the method adjudged most satisfactory by the surgical staff. The negative pressure treatment was found of especial value, and it was nearly always checked up by the roentgen ray. Figs. 4 and 5 illustrate this, in the case of a child. In the first plate the outline of the partly collapsed lung is shown; in the second, taken after application of the dressing, the lung fills the chest.

The next plate, Fig. 3, is a most interesting one from a roentgen standpoint. It was stated some minutes ago that fluid frequently appeared as an area of uniform density with a definite boundary, in the region of the axilla after tapping. As we have seen, the effusion, unless encapsulated, follows gravitation about the chest cavity, and the resulting thickened pleura is patchy and irregular in outline. The first case in which the appearance here shown was found was that of an Army lieutenant who had been tapped nine times for recurrent empyema, and was still coughing up considerable quantities of muco-purulent material. Diagnosis of effusion was made, and backed by the opinion of one of our best local clinicians. On taking his plates and report to an army camp this diagnosis was scouted by the Base Hospital surgeons there, who stated that it was characteristic of large numbers of their empyemata treated by the tapping, under negative pressure, not by thoracotomy, and that the line of demarcation represented the original extent of the pyogenic membrane, the whole shadow thus being due to thickened pleura. A few weeks later the patient here shown entered the hospital. He had been tapped, but no negative pressure used. He was now suffering from cough, pain, and elevation of temperature. After this plate was taken his wound was reopened, and a goodly amount of pus evacuated with relief. Opportunity to get another plate for comparison has not yet been presented.

The objections urged against the roentgen method are the danger to patients from manipulation, and the expense. As to the first, we have never had reported any ill effect. Very sick patients can be radiographed on the truck without the necessity of shifting to the examining table; as to expense, which for the large plates

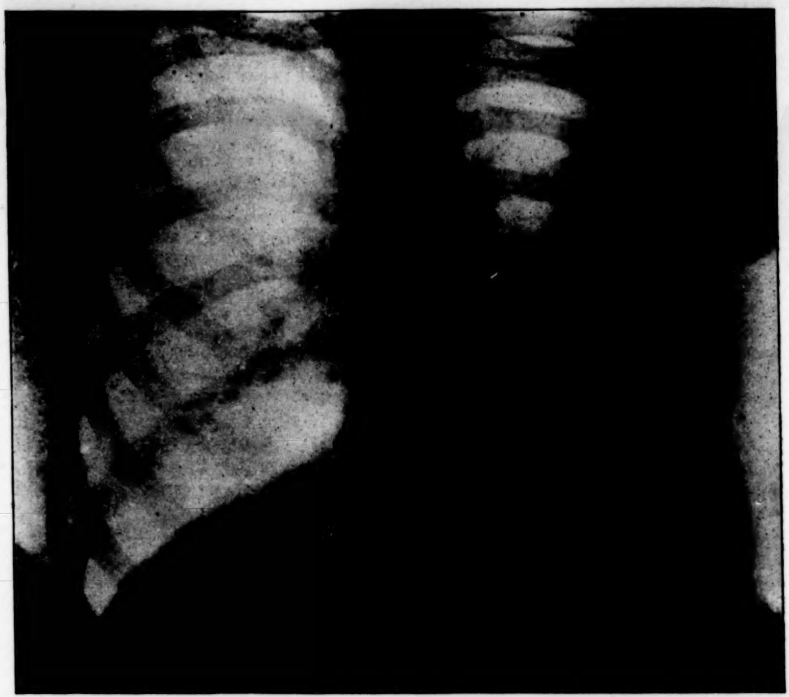

Fig. 3.—Empyema and thickened pleura.

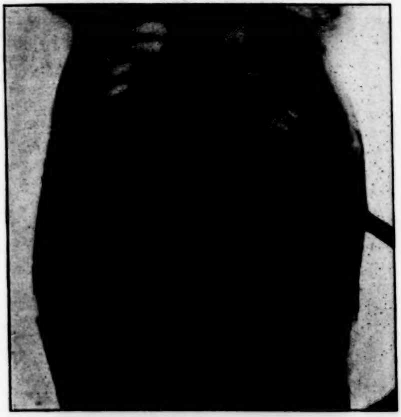

Fig. 4.—Lung partly collapsed.

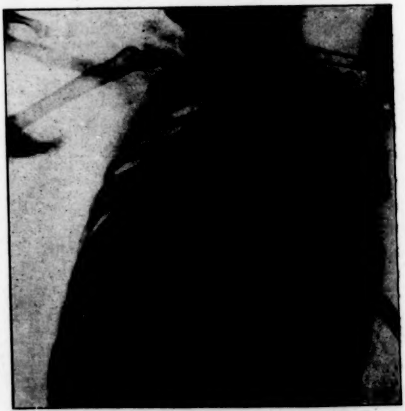

Fig. 5.—Lung expanded after application of negative pressure dressing.

needed is, it must be admitted, considerable, we feel that in many cases the information given has shortened the patient's stay in the hospital sufficiently to compensate for the additional outlay. The stereoscopic method is, of course, the ideal one, but it entails double expense, presents grave difficulties where many of the patients speak no English, and, except in a few cases, sufficiently exact information is given by the single flat plate.

Much work remains to be done before the roentgenologist can regard his knowledge of the chest as complete. In spite of all the work done, there remain many shadows whose interpretation is doubtful at best. For the unraveling of these problems we bespeak the continued coöperation of pathologists and clinicians.

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A NEW SIGN OF NERVE REGENERATION.

By Isador H. Coriat, M.D., Boston.

In his work on "Nerve Wounds," Tinel directed attention to a new and important sign of nerve regeneration. This is termed "*le signe du fourmillement,*" or the appearance of formication or tingling produced by pressure. This test, when taken in connection with the return of electrical conductivity and selective sensory regeneration to which I called attention in previous publications,[1] forms a triad of signs of regeneration which are very important from a practical standpoint, particularly in determining whether or not a nerve is spontaneously regenerating and thus postponing a projected suture, or in determining the actual success of a nerve suture. Thus the formication sign furnishes a very simple test for the detection of nerve regeneration.

Formication appears at a very early stage in nerve regeneration, usually at about the fourth or sixth week, while the return of electrical conductivity is a late development and usually only appears parallel with the return of voluntary movements. Formication in a nerve is a very important sign, for it indicates the presence of young axis-cylinders in the process of active regeneration. The anatomical and physiological[2] regeneration of a nerve always takes considerable time, since under the most favorable influences, the axis-cylinders do not grow more than one or two millimeters a day. However, as I previously pointed out, electrical treatment actively affects the axis-cylinders in producing an increase in nervous energy.

Whether or not the formication sign can appear in defective regeneration leading to neuromata, can be determined only by future clinical study. Regenerating axis-cylinders are spontaneously capable of traversing a certain distance due to the neurotropism of the peripheral end, but if the axis-cylinders encounter an obstacle, become blocked and wander in the cicatricial tissue which impedes the advance, it seems reasonable to suppose that in these cases the formication will be limited to the area of the neuroma or scar tissue and not radiate down the peripheral distribution of the nerve. Here the formication will be felt only at the point of pressure and remain fixed there. There will be an absence of progressive formication in the cutaneous nerve distribution.

Since the test is a new one for all practical purposes, it seems best to quote Tinel's exact words in its description.[3]

"When compression or percussion is lightly applied to the injured nerve trunk, we often find in the cutaneous region of the nerve a creeping sensation usually compared by the patient to that caused by electricity. Formication in the nerve is a very important sign, for it indicates the presence of young axis-cylinders in the process of regeneration. This formication is quite distinct from the pain on pressure, which exists in nerve irritations. The pain indeed, which essentially indicates the irritation of the axis-cylinders and not their regeneration, is almost always local, perceived at the very spot where the nerve is compressed, or at least magnified at this spot; it always co-exists with the pain in the muscular bellies under pressure, very often the muscles are more painful than the nerve. Formication of regeneration, on the other hand, is but little or not at all perceived at the spot compressed, but almost entirely in the cutaneous region of the nerve; the neighboring muscles are not painful. As a rule it appears only about the fourth or sixth week after the wound. It enables us to ascertain the existence of this regeneration and to follow its progress.

"If it remains fixed and limited to one spot for several consecutive weeks or months, this is because the axis-cylinders in their regeneration have encountered an insurmountable obstacle and are forced to group together on the spot in a more or less bulky neuroma.

"The fixity of formication on a level with the lesion and the complete absence of formication below the lesion would almost warrant our affirming the complete interruption of the nerve and the impossiblity of spontaneous regeneration.

"If, on the other hand, the regenerated axis-cylinders can overcome the obstacle and make their way into the peripheral segment of the nerve, we see a progressive migration of the formication so provoked. Pressure on the nerve below the wound produces this sensation, and from week to week it may be met with at a spot farther removed from the nerve lesion. The presence of formication provoked by pressure below the nerve lesion warrants our affirming that there is more or less complete regeneration.

"The zone of formication so brought out, changes its place on the nerve at the same time that the axis-cylinders are advancing; it extends progressively towards the periphery at the same time that it disappears at the level of the lesion.

"The 'formication sign' is thus of supreme importance, since it enables us to see whether the nerve is interrupted or in the course of regeneration, whether a nerve suture has succeeded or failed, or whether regeneration is rapid and satisfactory or reduced to a few insignificant fibres.

"Formication lasts a tolerably long time; appearing about the fourth week, it persists during the entire regeneration, *i.e.*, for eight, ten, twelve months or more, gradually drawing nearer the extremity of the limb. It ceases only when the regenerated axis-cylinders have almost regained their adult stage.

"Formication, however, may be absent, both on a level with the lesion and below it; this absence is an unfavorable prognostic point; it shows that the nerve regeneration is taking place imperfectly, mainly because of general disturbance of nutrition.

"The more it extends and shows itself towards the periphery of the nerve, the less marked it becomes, finally disappearing at the level of the portions of the nerve which are nearest the lesion. Consequently there is in the course of the nerve a wide zone of formication which can be brought on, spreads centrifugally, corresponds to the zone of growth of the young axis-cylinders, and at last completely disappears when the nerve fibres have regained their fully formed state.

"Let us follow, for instance, the progress of formication on a sciatic nerve sutured in the middle of the thigh: about the fourth week the formication appears at the level of the suture; at about the eighth week it is ascertained to be a few centimeters below; after three months it reaches the popliteal nerves at the upper third of the leg, but at the same time it disappears at the level of the lesion; at the fifth month the nerve formicates on pressure from the popliteal space to the level of the malleoli; finally, in the sixth month, it has reached the feet, but has disappeared as far as the upper third of the leg.

"Formication is the best and almost only sign of regeneration of the nerve; for not only does it enable us to follow the progress of regeneration, but through its intensity, rapidity of migration, and the region in which it appears, it even supplies exact information regarding the quality, extent, or limitation of regeneration.

"If the axis-cylinders stray and lose themselves in the tissues next to the lesion, formication reveals them; thus, in an interruption of the musculo-spiral, André-Thomas was able to demonstrate the presence of stray axis-cylinders in the muscles of the forearm.

"Any nerve that formicates below the lesion is a nerve in course of regeneration, either partly or wholly; absence of formication over the entire extent of a degenerated nerve trunk is an almost certain sign of absence of regeneration."

The following cases of nerve injury are briefly reported in order to show how the test is carried out and its value when taken in connection with other clinical signs of nerve regeneration. If unusual stress is laid upon the formication sign, it is because we wish to emphasize its importance in these particular instances.

Case 1. Bayonet wound of the right tibial and peroneal nerves, followed by immediate paralysis and loss of sensation in the motor and sensory distribution of these nerves. The nerves were sutured the day following the injury.

Seven months after the injury and suture, an examination revealed foot-drop, inability to flex or extend the foot or move the peroneal muscles, and moderate wasting of the thigh and calf muscles. The foot was cold and cyanotic, the skin was glossy and the nails had grown very slowly. There was a disturbance of both protopathic and epicritic sensation over the lateral cutaneous, saphenous, superficial peroneal and plantar nerves. In the atropied muscles there was a complete reaction of degeneration with polar inversion.

Pressure over the scar of wound and operation in the right popliteal space produced formication at the point of pressure radiating down the internal portion of the calf to the big toe, in the region of the superficial peroneal nerve. The sense of tingling in the big toe was quite distinct.

After six weeks treatment with galvanism and massage, the motor paralysis remained the same, but the trophic disturbance improved, the foot became less cyanotic and the nails began to grow. The formication sign became more marked, it could be elicited on slight pressure and radiated down the inner border of the calf and anterior surface of the foot, including the big toe. It now involved the distribution of the saphenous and superficial peroneal nerves and a portion of the plantar nerves over the entire area where sensation was disturbed, whereas at the first examination it was limited to peroneal distribution. The formication was now entirely in the cutaneous distribution of the nerves below the point of the lesion, while it had disappeared in the scar tissue at the point of pressure. This latter was important, since it seemed to indicate the advance of regenerating axis-cylinders from the point of lesion.

The formication was not fixed on the scar since fixity of formication would indicate that an obstacle had been encountered in the scar tissue or that a neuroma had formed.

Case 2. Pressure ulnar lesion, coming on about a week after a major operation and followed by progressive numbness, weakness, coldness and tingling of the area innervated by the ulnar nerve. An examination about four weeks after the onset of the difficulty showed a weakness and moderate atrophy of the ulnar group of muscles, typical sensory disturbances and a partial reaction of degeneration. Pressure over the ulnar nerve at the elbow produced distinct tingling of the little finger, showing that the axis-cylinders were not destroyed but were functioning properly, in spite of the sensory disturbances, weakness and atrophy and partial reaction of degeneration. On the basis of this a good prognosis for complete recovery was given.

Case 3. Following a fracture dislocation of the neck of the left humerous and an injury to the brachial plexus, the small internal cutaneous nerve was found torn. It was sutured about a month after the accident. About seven months later, although the condition had greatly improved, the entire arm was found weak with slight muscular wasting, sensory disturbances over the cutaneous distribution of the small internal cutaneous, musculo cutaneous and median nerves. There was a partial reaction of degeneration. No tingling on pressure over the sight of scar of operation over pectoralis. Pressure in axilla produced tingling over ulnar distribution of the hand; pressure on lower end of biceps muscle produced formication in the fingers along distribution of ulnar and median nerves. Since the ulnar and median nerves were involved in the brachial plexus injury, it seems that they were in process of regeneration.

Case 4. Traumatic ulnar lesion caused by lacerated wound of the left lower arm from glass. Numbness appeared in the ulnar region immediately after the accident with loss of power and coldness in the little and ring fingers. An x-ray showed a piece of glass close to the ulnar bone. An examination seven months after the accident demonstrated a weakness and atrophy of all the muscles innervated by the ulnar nerve with typical sensory disturbances and a reaction of degeneration. There was no formication on pressure over the scar, and no tingling around the scar. Pressure on the upper portion of the arm, above the scar, produced formication in the little finger, a demonstration that conduction through the regenerating axis-cylinders was unimpaired from the normal portion of the nerve through the lesion to the peripheral distribution of the nerve. Pressure below the scar produced the same sensation.

Case 5. Ulnar lesion of the left arm produced by a rifle bullet. The bullet entered midway into the ulnar aspect of the left forearm, stopped at the olecranon process and shattered the upper portion of the ulna and the head of the radius. The ulnar nerve was severed at the time of the accident and was sutured about eleven months later.

An examination two years after the accident showed typical epicritic and protopathic sensory disturbances over the ulnar distribution and weakness and slight atrophy of the ulnar group of muscles. The scar was a little tender on pressure and the patient complained of a little spontaneous tingling in the region with occasional shooting pains along the ulnar nerve. Pressure over the scar at any point produced formication along the ulnar aspect of the hand and radiating to the little finger. Pressure over the ulnar nerve at the elbow also produced tingling along the ulnar aspect of the hand and the little finger. This case demonstrated the same fact as did Case 4, namely, a persistence of regenerating axis-cylinders in the vicinity of the lesion. In this case, however, the time that had elapsed between the suture and the testing for formication was greater than any of the series, nearly two years. It proves, as Tinel has pointed out, that formication may last a long time, although its persistence in this instance was greater than in any of Tinel's material. It showed that the axis-cylinders were still in an active process of regeneration and had not yet regained their adult and mature stage.

Case 6. Ulnar lesion produced by a bullet wound in the ulnar side of the right forearm. An x-ray showed a foreign body 3 inches below the skin mark on the anterior surface of the right forearm near the ulnar. An examination nearly three weeks later showed weakness of the muscles innervated by the ulnar nerve with typical ulnar sensory disturbances. There was no muscular atrophy. Electrical tests showed a complete reaction of degeneration. Pressure above the scar of the wound produced formication of the ulnar side of the hand and of the little finger. Pressure below the scar produced the same sensation, but less intense. Evidently we are dealing here with a very rapid regeneration of axis-cylinders, since marked formication could be produced by pressure above the nerve lesion.

To summarize briefly, we have in the formication sign a valuable test for the detection of nerve regeneration. The test is very easily applied, but should be carefully done in each case, as the tingling produced by neuroma formation may lead to error. In neuroma formation or in the early stages of regeneration without neuroma formation, the formication is limited to the level of the lesion. In the neuroma formation also, where the regenerating axis-cylinders are blocked and may consequently lose themselves in the surrounding tissues, the formication remains fixed at the level of the lesion. In actual regeneration of the nerve the formication progresses over the zone of the growth of the axis-cylinders and can finally be detected along the partial or entire cutaneous distribution of the nerve. For a time it may involve the entire cutaneous distribution, but as regeneration becomes complete, it finally can be detected only in the extreme periphery.

The exact cause of this formication it is difficult to state, but since it can be produced by a far lighter pressure than formication in an uninjured nerve, it probably is due to an increased sensitiveness of the young axis-cylinders. It is best, however, not to rely upon the formication sign alone. The test should be carefully correlated with the other investigations of the nerve lesion, such as protopathic and epicritic sensibility, regenerating pain points, and electrical reactions.

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[1] Isador H. Coriat, "Selective Sensory Regeneration in an Ulnar Nerve Lesion," Journal A. M. A., Feb. 15, 1916. "The Sensory Evidence of Nerve Regeneration," Boston Med. and Surgical Journal, Feb. 8, 1917.

[2] For recent work in the physiology of peripheral nerves, see Keith Lucas' "The Conduction of the Nervous Impulse," 1917.

[3] J. Tinel, Nerve Wounds, 1917, pp. 34, 35; 75, 76.

DIAGNOSIS AND TREATMENT OF SYPHILIS.*

By Loretta Joy Cummins, M.D., Boston,

Dermatologist, New England Hospital for Women and Children, and New England Hospital Dispensary; Assistant Dermatologist, Massachusetts General Hospital.

The responsibility which rests on the physician of making an early diagnosis of syphilis is very great and cannot be too frequently brought to his attention. The majority of people consult the general practitioner first, and he is the one who must be made to realize that the life and future usefulness of the patient suffering with syphilis depends upon the early diagnosis and

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proper intensive treatment in the first six months or year of the disease.

At the present time every physician has at his command the laboratory where serological examinations can be made to aid in the diagnosis, and it is gross negligence for one to rely too much on his ability as a diagnostician, or to place too much dependence on the history and observations of the patient. Aside from the aid to diagnosis, the Wassermann report is a valuable part of the record of the case. Taking blood for the Wassermann is a simple operation which can be done by any careful worker, and, if done more often, would prove most valuable in clearing up so many of our obscure, chronic and persistently troublesome cases.

While speaking of the Wassermann test, let me here mention the fact which we all know, that one positive Wassermann does not necessarily mean lues any more than one negative means that a person has not lues, or that a treated case is cured. The laboratory test is a most helpful aid in making a diagnosis and in checking up a case under treatment, but it is not infallible. It is always a safe plan to have more than one Wassermann if there is any question of the clinical signs. One must remember in certain cases of syphilis, such as ocular syphilis, certain visceral lesions, central nervous system infection, and latent hereditary cases, there may be definite clinical signs and a negative Wassermann.

The dark field illumination furnishes a valuable means of corroboration in all suspicious genital and extragenital lesions, and the diagnosis of chancroid should not be positively made without this examination to exclude the possibility of a coincident infection with the treponema pallidum, for it is well known that the soft sore frequently harbors the parasite of syphilis.

The primary lesion of syphilis is described as a red spot or papule which develops in the course of a few days into a hard, round infiltration varying in size from a small pea to a bean. It is a well-defined infiltration which can readily be felt between the fingers. It is dull red in color, painless and hard. If dry and not exposed to friction it remains as a firm papule. When exposed to friction, the surface becomes eroded, and may remain smooth without granulations, and covered with a seropurulent exudate, or the center may become ulcerated and covered with a necrotic membrane. This is the so-called Hunterian chancre.

The characteristic features of the initial lesion are the sharply circumscribed dense induration, absence of subjective symptoms, and the slow, indolent course. In cases of mixed infection these characteristics are often absent, or masked by the more acute inflammatory process.

The secondary stage begins when the spirochete gains entrance into the general circulation and the disease becomes constitutional. General enlargement of the lymphatic glands is the first objective evidence of the secondary stage. The inguinal, cervical, epitrochlear and axillary glands are most commonly affected, and are usually small, painless, non-tender and indolent. They remain enlarged during the eruptive stage, and gradually disappear. Occasionally some of the glands, especially the inguinal, remain enlarged for years.

The secondary cutaneous eruption may be of all types from macules to nodules. The color is brownish red, or is often described as ham color. The eruption occurs in characteristic groups, in circles or segments of circles, is generalized and bilateral. It is often more abundant on the forehead, around the nose and mouth, front of the trunk, and on the palms and soles. The multiformity of lesions is quite characteristic of syphilis, as is the absence of subjective symptoms of itching, burning, and pain. When one takes into consideration the combination of these characteristics, it forms a symptom complex, which makes the differential diagnosis from other cutaneous diseases fairly simple in the majority of cases.

I will not take time to go into the various types of syphilitic eruption, but would suggest that you frequently review the subject, for now, more than ever before, we are being urged to take a more active part in trying to control and check the spread of this dread disease. The public is being educated by moving pictures, lectures and literature, and a well organized campaign has been launched by the government health authorities, and we, as physicians, must be able to recognize the disease and be active in this great crusade for the health of our people. The physician is entrusted not only with the health of the individual who consults him (for each case is capable of such far-reaching effects that he cannot afford to treat it lightly, or as an individual case), but must keep in mind the fact that one cannot calculate how far the infection may spread from one person with open lesion, and also that the health of the coming generation is dependent upon him.

The tertiary stage is characterized by the development of gummatous lesions in the tissues. These cause irreparable damage, and result in scar formation. When the lesions are cutaneous the diagnosis is, as a rule, simple, but the same process may go on in the viscera and give rise to grave subjective symptoms.

The Wassermann reaction becomes positive only after the infection has become generalized, and the time given by different writers varies. The earliest date recorded is by Craig, who found a positive Wassermann five days after the appearance of the primary lesion. Boas reports the usual time to be the sixth or seventh week; and Fordyce reports the majority after the fourth week. When the secondary stage is well developed, and the patient presents cutaneous manifestations, Fordyce states, the reaction is positive in 100% of cases.

The Wassermann is most valuable in checking up cases where the diagnosis was made in the primary stage by the dark field and aborted by early intensive treatment.

One of the greatest advances made in our knowledge of syphilis is that involvement of the central nervous system takes place in the secondary stage. It is, therefore, most important that the physician should study his patient closely, and be keen to observe beginning eye changes or other signs of central nervous system involvement.

We all know that when a patient has an infection with the treponema pallidum, that person is doomed to a long and protracted course of treatment, but let me state here that there is no prescribed course of treatment that can be followed in all cases with the assurance that the patient must be getting well. We must be alert for signs of involvement of the neuroaxis, and vary our treatment as the condition presents itself.

Unless there is some special indication for it, lumbar puncture should not be made until the patient has had at least one course of salvarsan. Until about two years ago lumbar puncture was not made until a case was about to be discharged as cured, unless there were clinical symptoms of neuro-syphilis, but now an early puncture is made to determine the status of the infection, and to give the patient the benefit of early treatment to prevent the pathological changes of optic atrophy, tabes, and paresis.

It has been stated that the infection of the cerebrospinal axis is not a matter of chance, but follows infection by a special strain of spirochete. To discover the infection in the spinal fluid, before pathological changes have developed, is one of the greatest advances of preventive medicine, because, by proper treatment, tabes and paresis can be prevented.

The technique of lumbar puncture is as follows:

The patient lies on his side, with hips just over the edge of the bed. The knees are flexed on the abdomen, and the shoulders bent forward to approximate as nearly as possible the knees. The upper shoulder is then drawn slightly forward. The puncture should be made in the median line, in the second and third, or third and fourth lumbar interspace. The point of entrance of the needle is marked on the skin by the fingernail. The skin is then washed with soap and water, tincture of iodine and alcohol. An 18 gauge Quincke needle is used. This is dry sterilized in a glass container. When puncture is made for diagnosis, two sterile tubes are used. In one 2 c.c. of fluid is collected for the cell count and globulin test, and in the other 6 or 7 c.c. for the Wassermann and colloidal gold tests. The cell count and globulin tests are done immediately.

When the examination or puncture is made at the patient's home, the fluid should be prepared for examination at the bedside, and the cell count made as soon as the physician reaches the office or laboratory. The globulin test is as follows: About 1 c.c. of Pandy solution (saturated solution of carbolic acid) is placed in a small test tube, and one drop of spinal fluid added. Shake tube to see if there is any color change. Then add three more drops, and read. If positive, the solution will have a cloudy, opalescent appearance.

The cell, or leucocyte, count is at follows: Use white blood counter. Draw up 15% acetic acid to the I mark on the pipette, which is then filled to the II mark with spinal fluid. The fluid in the capillary portion of the tube is then blown out, and a drop of fluid from the chamber run onto the counting stage. The cover slip is then placed on the slide with firm pressure. The cells on the whole ruled surface of the Thoma-Zeiss chamber must be counted. This number multiplied by 10 and divided by 8 gives the number of cells in one cubic millimetre of undiluted fluid. A cell count of five in a cubic millimetre is normal.

The Wassermann reaction is the important factor in determining the treatment in all cases. In early cases, with a weakly positive reaction and low cell count, only intravenous treatment, together with mercury injections, are employed; but if this does not bring about negative findings, then the combined treatment must be instituted.

If, on first examination, the Wassermann reaction is found to be strongly positive with 0.4 or 0.2 c.c. of fluid, the combination of intravenous and intraspinal treatment should be started at once.

The colloidal gold test is valuable in making a differential diagnosis in the types of neurosyphilis, and a paretic curve will be shown in the preparetic stage before a clinical diagnosis can be made. This test gives most valuable aid in the treatment of the case. A paretic curve may be found in brain abscess and multiple sclerosis, but in these cases we do not get a positive Wassermann.

The complete examination of the spinal fluid consists of a Wassermann test, globulin test, cell count and colloidal gold test.

In the past, tabes and paresis have been diagnosed clinically by the neurologist. Then the damage is done, pathological changes have taken place, and the best one can hope for is an arrest of symptoms; but restoration to normal conditions is impossible. We must prevent these changes taking place.

The treatment generally used is the Swift-Ellis-Ogilvie.

For intraspinal treatments, the patient should be given appointments for a series of treatments at intervals of two weeks. Eight treatments constitute a course; and an interval of two months should be allowed between each course. A day or two before the intraspinal treatment is given the patient receives an intravenous injection of salvarsan, 0.4 to 0.6 gram. One-half hour later 50 cc. of blood is removed in a sterile tube, and kept in the refrigerator over night. The following day it is centrifuged and the serum pipetted off into another sterile tube, and centrifuged again to make sure there are no remaining red cells. To this serum is added 1/20 to 1/2 mg. of salvarsan, according to the needs of the case. This is inactivity at 55 to 57 degrees C. for thirty minutes, and is then ready for administration.

Treatment is usually begun with 0.1 mg., and increased gradually to 0.5 mg. Patients with paresis tolerate larger doses than those suffering with tabes or other forms of cerebro-spinal syphilis. By doing lumbar puncture one can detect early changes; so why defer doing a simple, harmless operation when so much can be revealed, and so much is at stake?

Much is said against the intraspinal treatment, because so often it has been tried on well advanced neurological cases, and the results have been so disappointing. We must not deny any possible help to those who, in their suffering, are reaching out for a straw: but the great field of service for this method of treatment is along the lines of preventive medicine, and the physician who can carefully check up his cases by accurate laboratory examinations cannot help becoming converted and most enthusiastic about this form of treatment.

The management of a case of syphilis should not be in the hands of the general practitioner, for, while he may be able to clear up all physical signs of the disease, he is not capable of assuming the great responsibility of a cure. The advances made in the treatment of syphilis have been so great that even specialists today must be very alert in order to be up to the minute.

Treatment of cases where there is no involvement of the central nervous system is influenced by the stage of the disease and the individual susceptibility of the patient.

In the uncomplicated cases of lues the following general rules for treatment are suggested:

If a case is seen in the primary stage (before the spirochete has gained the general circulation) a full dose of salvarsan should be given at once. These patients should be given a full course of treatment, which consists of six or eight doses of salvarsan and twelve injections of mercury, at intervals of one week. A few days should elapse between the salvarsan and mercury injections. Even though the Wassermann may still be negative, it is well to use the proverbial ounce of prevention and give a second course, or give mercury for several months.

If the case is seen in the secondary stage, a mercury injection should always precede the salvarsan treatment, to prevent a Herxheimer reaction. A Herxheimer reaction is an intensification of symptoms which sometimes follows the first injection of salvarsan. It may be due to the sudden freeing of spirochetal proteins, or irritation of the living organisms themselves. In about two days the regular course of treatment may be instituted. Treatment should always be given in regular courses of six to eight injections of salvarsan, together with twelve injections of mercury at weekly intervals. Rest one month, and take a Wassermann. Three courses are given in a year. If the Wassermann becomes negative after the first course, do not stop there, but give a second course. Ordinarily an early case can be cured in two courses.

In tertiary cases the treatment varies greatly with the needs of the case, but it is here that the mixed treatment is of greatest value, and potassium iodide will often bring about most remarkable changes in both subjective and objective symptoms.

The dose of salvarsan is regulated according to the age, sex and weight of the patient. The general rule for an adult is 0.1 gm. for every thirty pounds. The usual dose is 0.3 gm. to 0.5 gm. for men, and 0.2 to 0.4 gm. for women.

For the mercury injections, either the soluble or insoluble preparations may be employed. If the soluble form of mercury is to be used, injections should be given every day, or every other day, and if the insoluble salt is used, the injections are given at weekly intervals.

A treated case of lues may be pronounced cured when the Wassermann has been persistently negative for one year, without treatment, and after a provocative salvarsan.

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The Massachusetts State Committee, Council of National Defense, Medical Section.

LIST OF MASSACHUSETTS PHYSICIANS IN THE MEDICAL CORPS OF THE UNITED STATES ARMY, NAVY, THE RED CROSS, OR BRITISH SERVICE DURING THE WORLD WAR.

COMPILED BY THE MASSACHUSETTS STATE COMMITTEE, COUNCIL OF NATIONAL DEFENSE, MEDICAL SECTION, JULY, 1919.

Names in Roman face type are those who served in the Army, unless otherwise indicated. Names in italic type are those recommended for commissions, but not called to service.

A

Aaronson, Jacob	Chelsea
Abbe, Frederick R.	Dorchester
Abbot, Edward S.	Belmont
Adams, Donald S.	Boston
Adams, Edward A.,	Newton Lower Falls
Adams, Frank D.	Boston
Adams, William B.	Springfield
Adams, Winthrop, Navy	Worcester
Adams, Zabdiel B.	Boston
Agnew, John R.	Chicopee
Ahearne, Cornelius A., Jr.	Salem
Ahern, John Francis	Dorchester
Aimone, Victor A.	Winchester
Akerly, Arthur W. K.	Boston
Albee, George M.	Worcester
Alexander, T. Branch	Scituate
Alexander, Harry L.	Boston
Alexander, Kirke L.	Orange
Alford, Leland Barton, Navy	Dorchester Ctr.
Allard, Carleton E.	Dorchester
Allen, Arthur W.	Boston
Allen, Fred H.	Holyoke
Allen, Granville S.	Lawrence
Allen, William H.	Mansfield
Alling, Marshall L.	Lowell
Allison, Carl E.	Somerville
Amiral, Hiram H	Boston
Anderson, John H.	Brockton
Andrews, Robert E.	Cambridge
Andrews, Sumner C.	Gloucester
Angell, Worcester Randolph, Navy	Brookline
Annis, Sumner B.	Natick
Anthony, George C.	Wellesley
Applebaum, Jacob, Navy	Boston
Arnold, Horace D.	Boston
Arnold, Seth F., Navy	Boston
Aschmann, Theodore H.	Boston
Ash, James E.	Boston
Ash, Richard M.	West Quincy
Ashmore, Buell L.	Palmer
Atchison, C. M., Navy	New Bedford
Atkinson, Frederick Charles	Methuen
Aub, Joseph C.	Boston
Audet, Charles H.	Salem
Austin, Arthur E.	Boston
Ayer, James B.	Boston

B

Babcock, Harold L.	Boston
Bacon, John L.	Southboro
Bacon, Joseph A. P.	Lawrence
Badger, George S. C.	Boston
Baff, Max	Worcester
Bagnall, Elmer S.	Groveland
Bailey, Charles H.	Gardner
Bailey, Frederick J., Navy	Dorchester
Bailey, Karl R.	Boston
Bailey, Walter C., Red Cross	Boston
Baker, Horace M.	Boston
Balch, Franklin G.	Boston
Ball, Arthur N.	Northampton
Banquer, Jacob E.	Boston

Bard, Henry H.	Pittsfield
Bardwell, Frederick A.	Boston
Barnes, Frederick R.	Fall River
Barnes, Harry A.	Boston
Barnes, Louis D.	Lanesboro
Barney, Willis O., Navy	Boston
Barnum, Francis G.	Boston
Barrett, Michael Francis	Brockton
Barrow, Allen R., Navy	Allston
Barrow, William H.	Boston
Bartlett, William B.	Concord
Bartol, Edward F. W.	Milton
Bartol, John W.	Boston
Basch, William E. R.	Winthrop
Batchelder, Hollis G.	Dedham
Bates, Charles A.	Ashburnham
Baum, Ewald G.	Natick
Baxter, Clarence P.	Topsfield
Baxter, William E.	Topsfield
Beal, Howard W., Died in service	Worcester
Beals, L. H.	Northampton
Bean, Harold C., Navy	Boston
Bearse, Carl	Boston
Beaudet, Elphege A.	Lowell
Beaupre, Dolor I.	Holyoke
Beckley, Chester C.	Lancaster
Bedard, Joseph Armand, Red Cross	Lynn
Beebe, Theodore C.	Boston
Begg, Alexander S.	Jamaica Plain
Behrman, Roland A.	Roslindale
Belding, David L.	Watertown
Bell, Richard D.	Somerville
Benner, Richard S.	Springfield
Benoit, S. J.	Gardner
Bergeron, George G.	Springfield
Berr, Alfred William, Died in service	Lawrence
Berry, Frank B.	Cambridge
Berry, Gordon	Worcester
Berry, Walter D.	Braintree
Bigelow, Edward B.	Worcester
Bigelow, George H.	Boston
Bigelow, James B.	Holyoke
Bill, José P.	Boston
Binney, George H.	Boston
Binney, Horace	Boston
Biondi, George A.	Framingham
Birdsall, Clarence H.	Boston
Birnie, John M.	Springfield
Bisbee, Ernest S.	Boston
Bishop, Franklin L.	East Boston
Bishop, W. A.	N. Abington
Blair, Orlando R., Navy	Springfield
Blaisdell, John H.	Boston
Blake, Gerald	Boston
Blanchard, Paul D.	Lowell
Blanchard, William B.	Framingham
Blanchard, William H.	Allston
Blanchette, William H.	Fall River
Blodgett, Stephen H.	Lincoln
Blood, George W.	Fall River
Blue, John Jacob, Navy	Nantucket
Boardman, William P.	Boston
Bock, Arlie V.	Boston
Bogan, Fred L.	Boston
Boland, Daniel J.	Worcester
Bolduc, Alfred G.	Attleboro
Bolotow, Nathan A.	Boston
Bonelli, Raymond P.	Boston
Bonneville, Alfred J.	Hatfield
Boothby, Walter M.	Boston
Bostick, Warren J.	W. Springfield
Bottomley, John T.	Boston
Boutwell, Horace K.	Brookline
Bowen, James F.	Amherst
Bowers, George F. H.	Worcester
Bowman, Herbert Eli	Winter Hill
Boyd, James Van W.	Springfield
Boyer, Joseph N., Jr.	Springfield
Brackett, Elliott G.,	Boston
Bracy, James Madison	Roxbury
Brady, Cecil Norbert	W. Newton
Brady, William Francis	Holyoke
Bragg, Leslie R.	Webster
Brant, Austin, Navy	Boston
Brassil, T. F.	Cambridge
Brearton, Edward J.	Dorchester
Breed, Nathaniel P.	Lynn
Bremer, John L., Red Cross	Boston
Brennan, Joseph T. L., Navy	Lowell
Bresnahan, John F.	Boston
Bressler, Charles W.	Boston
Brickley, William J., Navy	Boston
Bridges, E. Stanley, British Service	Worcester
Bridgwood, David, Navy	Worcester
Briggs, Lloyd V.	Boston
Briggs, Maurice T., Navy	Boston
Brigham, Francis G.	Boston
Brindamour, Joseph E.	Holyoke
Brine, Elmer L., Navy	Boston
Brown, Abe A.	Waltham
Brown, Arthur L.	Winchester
Brown, Chester P.	Chelsea
Brown, Percy	Boston
Brown, Ralph N.	Malden
Brown, Roy F.	Fall River
Browne, William E.	Boston
Brunelle, Arthur L.	New Bedford
Bruninghaus, Charles W.	Worcester
Bruckshaw, Andrew N., Navy	Fairhaven
Bryant, John	Boston
Bryant, Mason D.	Lowell
Bryer, James A.	N. Attleboro
Buck, William E.	Chelmsford
Buckley, George A.	Brockton
Buckley, James T.	Marlboro
Buckley, William S.	Brighton
Buckman, Thomas E.	Boston
Budington, Harold F.	Springfield
Budreski, Alphonse F.	Brighton
Bull, Edward C.	Boston
Bunker, Henry A., Jr.	Boston
Bunker, Sidney M.	Worcester
Bunnell, George L.	Foxboro
Burke, Francis R.	Quincy
Burke, George H.	Springfield
Burke, John H.	Jamaica Plain
Burke, John R.	Boston
Burkhead, James H.	Middleboro
Burnett, Francis L., Navy	Manchester

Burnett, Louis R.	Cambridge
Burnette, John E.	Brockton
Burnham, J. Forrest	Lawrence
Burns, John E.	Cambridge
Burns, William B.	Dorchester
Burpee, Benjamin P.	Boston
Burpee, Carroll C.	Malden
Burrell, Harry C	Medford
Burt, Clarence E.	New Bedford
Burt, Edward W.	Westport
Bushnell, Edward H.	Quincy
Butler, Charles S.	Boston
Butler, David M.	Brockton
Butler, George E., Navy	Fall River
Butler, Patrick F.	Allston
Butler, Samuel	W. Medway
Byrne, William R.	Framingham
Byrnes, Harry F.	Springfield

C

Cabot, Hugh, British Service	Boston
Cabot, Richard C.	Boston
Cady, Frederic B. M.	Cambridge
Cahill, Harry P.	Boston
Cahill, John W.	Worcester
Cahill, Thomas J.	Cambridge
Caines, Richard J. R.	Boston
Caldicott, Francis S.	Billerica
Callahan, Henry A.	Jamaica Plain
Callahan, John F.	Brockton
Callanan, Francis J.	Boston
Campbell, Franklin E., Navy	W. Medford
Canedy, Charles F.	Greenfield
Cannon, Walter B.	Cambridge
Capeles, Thomas F.	Haverhill
Capelle, C. S.	Roxbury
Carden, Charles J.	Haverhill
Carleton, Francis B.	Boston
Carley, Arthur W.	Ayer
Carlton, Frank C.	Salem
Carney, Harold E.	Boston
Caro, Heiman, Died in service	Palmer
Carpenter, Robert J.	North Adams
Carr, Arthur W.	Bridgewater
Carroll, John P.	Woburn
Carroll, Michael J., Navy, Died in service.	Lenox
Carroll, Thomas F.	Brookline
Cassidy, Franklin C.	Medford
Caswell, Bertram H.	Somerville
Caulfield, Thomas E.	Woburn
Cavanaugh, Mortimer T.	Gt. Barrington
Cavanaugh, Thomas E.	Holyoke
Ceconi, John A.	Dorchester
Chadwell, Orville R.	Boston
Chaffin, George L.	Boston
Chagnon, Deodatus T.	Lowell
Chalfen, Samuel E.	Cambridge
Chambers, Ralph M.	Westboro
Chamberlain, Harold A., Navy	Boston
Chandler, Clarence L.	Fitchburg
Chandler, Harold B.	West Newton
Chandler, Thomas E.	Brookline
Chapin, William A.	Springfield
Chaput, Lucien R.	Haverhill
Chase, Charles O., Navy	Watertown
Chase, Daniel E.	Cambridge
Chase, Frank H.	Chelsea
Chase, Gilman L.	Clinton
Chase, Heman B.	Hyannis
Chase, Henry M.	Boston
Chase, James C.	Hanson
Cheever, Austin W., Navy	Mattapan
Cheever, David, British Service	Boston
Cheney, Harry C.	Palmer
Cheney, Marshall C.	Boston
Chereskin, Johnston L.	Springfield
Chisholm, Lawrence C., Navy	Salem
Chisholm, Miles D.	Westfield
Choate, Alton J.	Gloucester
Choquette, Hormidas	New Bedford
Christian, Henry A.	Boston
Christie, James D.	Littleton
Chronquest, Alfred P.	Danvers
Claffy, John M.	Springfield
Clancy, Leo J., Navy	Holliston
Clark, Albert U. F.	Westboro
Clark, Cecil W.	Newtonville
Clark, Dewitt S.	Salem
Clark, Ernest M.	Ashburnham
Clark, Frank R.	Newtonville
Clark, Frederick T.	Westfield
Clark, Harry A.	North Andover
Clark, Millard C.	Lawrence
Clark, W. Irving, Jr.	Worcester
Clarke, Joshua W.	Attleboro
Clarke, Philip H.	Holyoke
Clarke, Willis E.	Malden
Cleary, Robert E., Navy	Holyoke
Cleverly, Harry F.	Scituate
Clifford, Randall, Navy	New Bedford
Cline, Samuel, Navy	Roxbury
Cloudman, Harry R.	Brockton
Clute, Howard M.	Boston
Clymer, George	Boston
Coates, Edward A., Jr.	Chelsea
Cobb, Chester T.	Northampton
Cobb, Gardner N., Navy	Boston
Coburn, Harry R.	Tewksbury
Cochrane, Robert C.	Boston
Codman, Ernest A.	Boston
Coffin, Frank H.	Haverhill
Coffin, Rockwell A., Navy	Boston
Coffin, Whitman K.	Provincetown
Cogswell, George P.	Cambridge
Cogswell, William	Haverhill
Cohen, Nathan M.	Dorchester
Cohen, Samuel A.	Roxbury
Colby, Fletcher H.	Boston
Coleman, Daniel B.	Wellesley
Colgate, Charles H.	Rockland
Collins, John F.	Marlboro
Collins, Joseph D.	Northampton
Collins, William J.	Northampton
Collins, William M.	Lowell
Colton, Hubert P.	Westfield
Colwell, Howard S.	Worcester
Colwill, Albert W.	Worcester
Condrick, John J.	Brockton
Connell, Thomas M.	Walpole

Connelly, John E.	Brookline
Conner, Homer L.	Haverhill
Connery, William L.	Springfield
Connolly, William E.	Dorchester
Connor, George A.	Cambridge
Connor, George J.	Haverhill
Connor, Harold J.	Boston
Connor, William H., Navy	Pittsfield
Cook, James H.	Quincy
Cook, Paul C., Navy	Pittsfield
Cook, Robert J.	Boston
Cook, William W.	Brookline
Cooke, George A.	Montague
Cooney, Michael E.	Northampton
Corcoran, George B., Navy	W. Springfield
Corr, Francis X.	Dorchester
Cort, Parker M.	Springfield
Cosgrove, Joseph J.	Westfield
Cotter, Edward J., Navy	Boston
Cotting, William F.	Boston
Cottle, George F., Navy	Edgartown
Cotton, Frederic J.	Boston
Councilman, William T.	Boston
Coupal, James F.	Boston
Courie, Wadie F.	Boston
Courtemanche, Joseph A.	Lynn
Courtney, Thomas J., Navy, Died in service.	Waltham
Cowett, Max P.	Chicopee Falls
Cowles, Dwight, Navy	Beverly
Cowles, William L.	Boston
Cox, Oscar F., Jr.	Boston
Cox, Stanley C.	Holyoke
Cox, Thomas	Fall River
Crabtree, Ernest G., British Service	Boston
Craigin, George A.	Boston
Crandall, Walter M.	Lawrence
Crandon, Le Roi G., Navy	Boston
Cranz, Alwin H.	Brookline
Crawford, Frank W.	Holbrook
Cremens, John F., Navy	Cambridge
Crimmin, Leo P.	South Boston
Crockett, Eugene A., Red Cross	Boston
Crofton, George H.	Worcester
Crofts, Nicholas M.	North Adams
Crosbie, Arthur H.	Boston
Cross, L. H.	Winchendon
Crothers, Bronson	Cambridge
Cullen, Charles A., Navy	Hyde Park
Cunna, Manuel F.	Boston
Cunningham, Edward A.	Belmont
Cunningham, Richard A.	Boston
Cunningham, Thomas D.	Boston
Curley, Clarence P., Navy	Provincetown
Curran, Arthur M.	North Adams
Curran, George L.	North Adams
Curran, Simon F.	Dorchester
Currier, Cyrus R., Navy	Sandwich
Curtin, John F.	Lawrence
Curtin, John J.	Waltham
Curtis, Charles L.	Salem
Curtis, Harlan F.	E. Longmeadow
Curtis, W. G.	Wollaston
Cushing, Arthur A.	Brookline
Cushing, Harvey	Brookline
Cutler, Elliot C.	Boston
Cutter, Irving T.	Winchester

D

Dacey, Cornelius J.	Brockton
Dahlen, Carl A.	Boston
Dailey, Edward J.	Somerville
Daland, Ernest	Wakefield
Dalrymple, Sidney C.	W. Medford
Dalrymple, Alfred T.	South Boston
Dalton, George F	Springfield
Dalton, Stephen J.	Marlboro
Dana, Harold W.	Boston
Danforth, Murray S.	Boston
Darling, Arthur E.	Lynn
Darling, Charles B.	Boston
Darling, Eugene A.	Cambridge
Dascombe, Otho L.	Waltham
Davidson, Harvey D.	Springfield
Davis, Charles H.	So. Hamilton
Davis, Ernest L.	Springfield
Davis, Frank A.	Boston
Davis, Henry L.	Lynn
Davis, Lincoln	Boston
Dean, Archie L., Jr.	Boston
Dearborn, George V.	Cambridge
Dearborn, Henry F.	Lawrence
Dedrick, Albert C.	Fall River
Deems, Oren M.	Springfield
Deering, Charles F.	Danvers
Deering, George E.	Worcester
Delaney, Thomas B.	Lowell
Dempsey, J. Edward	Newton
Dennen, Ralph W.	Waltham
Dennett, Daniel C.	Winchester
Dennett, Paul C.	Allston
Denning, William E.	Worcester
Denny, George P.	Boston
Derby, George S.	Boston
Devan, Thomas A.	Boston
Devenny, Joseph H.	Dorchester
DeWolf, Charles W.	Tewksbury
Dexter, Fred F.	Longmeadow
Diehl, Harold E.	Quincy
Dillenback, Emil U.	Springfield
Dillon, William J.	Springfield
Dimento, Vincent J.	Boston
Dobson, Clarence H.	Conway
Dobson, William M.	Dorchester
Dodd, Isaac, S. F.	Pittsfield
Dodge, Arthur M.	Boston
Dodge, Ralph O.	Hyde Park
Dolan, William F.	Quincy
Dole, Kenneth L.	Jamaica Plain
Dolloff, Eugene M.	Lynn
Donovan, Jeremiah J.	Roslindale
Donovan, Thomas R.	Fitchburg
Donovan, Timothy S.	Lawrence
Donovan, Walter	Springfield
Doucet, Charles S.	Lowell
Dow, David C., Navy	Cambridge
Dow, Frank E.	Northampton

Dow, George F.	Reading
Dowling, John J.	Boston
Downing, Dana F.	Westboro
Downing, John G., Navy	Boston
Doyle, John H.	Fall River
Drake, Wallace H.	N. Weymouth
Draper, Frank E.	Boston
Dresel, Rudolph L.	Boston
Drouin, Wilfred	Holyoke
Drury, Dana W.	Boston
Dubois, Eoline C., Red Cross	Springfield
Dudley, Augustus W., Navy	Cambridge
Dudley, Charles	Kingston
Dudley, Oscar A.	Cochituate
Duff, John, Jr., Navy	Charlestown
Duffy, Edward A.	Boston
Dunham, Harry B.	Brockton
Dunn, Joseph H.	Rockland
Dunphy, P. J., Navy	Boston
Dursthoff, L. C.	Lowell
Dwinell, George F.	Boston
Dwyer, John E., Jr.	Cambridge
Dwyer, William J.	Cambridge
Dyer, Ernest A.	Salem

E

Eastman, Alexander C.	Springfield
Eastman, George W., Navy	Lynn
Eastman, Luther G.	Newton
Eaton, Harold B.	Boston
Eaton, William E., Navy	Boston
Edwards, Martin R.	Boston
Eldridge, David G., Navy	Dorchester
Eliot, Henry W.	Belchertown
Ellam, Herbert W.	Gardner
Ellison, Daniel J.	Lowell
Ellsworth, Samuel W.	Boston
Ely, Theodore W.	Boston
Emerson, Benjamin K., Jr.	Worcester
Emerson, Francis P.	Brookline
Emerson, Paul W.	Boston
Emery, George E.	Worcester
Emery, Robert L.	Rockport
Emery, Wm. Edward. Died in service.	Beverly
Emmons, Arthur B., 2nd	Boston
Emmons, Henry M.	Jamaica Plain
English, Hubert M.	Foxborough
English, Martin J.	Boston
Erlenbach, James H.	Boston
Ernst, Harold C.	Jamaica Plain
Eustis, Richard S.	Boston
Evans, Robert J., Jr.	Springfield
Eveleth, Samuel C.	Marblehead
Everett, Frederick L.	Springfield
Ewing, Edward H.	Stoughton

F

Fabyan, Marshall	Boston
Fairbanks, Arthur W.	Boston
Falk, Jacob B.	Boston
Fallon, Joseph F.	Brookline
Falvey, Humphrey J.	Worcester
Farr, Irvin H.	Holyoke
Faulkner, William E.	Boston
Faunce, C. B., Jr.	Boston
Favour, Richmond, Jr.	Natick
Faxon, Nathaniel W.	Stoughton
Fay, William J.	Worcester
Feeley, Walter, Navy	Cambridge
Felch, George A.	Boston
Fellows, Albert W.	Boston
Fennelly, Daniel J.	Fall River
Fennessey, John F.	Dorchester
Fenton, Alfred A.	Norwood
Fernald, Guy G.	Concord Jct.
Fiege, Herbert R.	Waverley
Field, Charles K., Red Cross	Brookline
Field, Henry M.	Norwood
Fielden, John S. C., Jr.	Fall River
Finkelstein, Harry	Boston
Finnegan, Francis A.	Lowell
Finnegan, Philip J.	Salem
Finnerty, Charles W.	W. Somerville
Fiske, Eben W.	Boston
Fitts, Henry B., Navy	Provincetown
Fitts, John B.	Boston
Fitz, Reginald	Boston
Fitzgibbon, Edward J.	Dorchester
Fitzsimmons, Henry J.	Forest Hills
Flagg, Elisha	Boston
Flagg, Harry H.	Charlestown
Flanders, Walter H., Navy	Melrose
Fleming, Peter J.	Mattapan
Fletcher, Robert S.	Oxford
Fobes, Howard E., Navy	Brockton
Fogg, Neil A.	Boston
Foley, Joseph D.	Springfield
Foran, Francis L.	Worcester
Forbes, Alexander, Navy	Milton
Forbes, Henry S.	Boston
Ford, John F.	Roslindale
Forhan, Neil K.	Billerica
Fornell, Carl H., Navy	Quincy
Foss, George H.	Springfield
Foster, Ellis E., Navy	New Bedford
Foster, John H.	Boston
Fox, William Y.	Taunton
Fraim, Irving W.	Waltham
Fraser, Archibald M.	Boston
Fraser, Somers	Boston
Fraser, William L.	Lynn
Fregeau, Aime N.	Fitchburg
French, Edward	Brighton
French, Leland M., Navy	Worcester
Fried, Anton R.	Newtonville
Frothingham, Channing	Boston
Fullerton, Walter W.	Brockton

G

Gabler, George L.	Holyoke
Gaetani, Arthur L., Navy	Dorchester
Gage, Homer	Worcester
Gallagher, John H. C.	Chicopee
Gallagher, Nicholas A.	Malden
Galvin, Augustus, H.	Springfield
Ganley, A. J.	Methuen
Garbelnick, David A.	Haverhill
Gardner, Archibald R.	Lowell

Gardner, Howard E., Navy	Springfield
Gardner, Leroy U.	Cambridge
Garfield, Walter T.	Belmont
Gates, Ernest A.	Springfield
Gay, Fritz W.	Malden
Gay, Leslie N.	Boston
Gay, William H.	Sharon
Gelineau, Joseph H.	Easthampton
Genereux, Edmond A.	Worcester
Gennert, Jacob	New Bedford
George, Arial W.	Boston
George, Arthur P.	Haverhill
George, Frank W.	Worcester
Gerrard, Henry C.	Springfield
Gettings, James H.	Boston
Ghoreyeb, Albert A. W.	Boston
Gibson, Frank L.	Holyoke
Gilbert, Maurice A.	Chelsea
Gilchrist, John M.	Springfield
Gilchrist, Virgil M., Red Cross	Boston
Gilfillan, Donald R.	Worcester
Gillespie, Norman W.	Boston
Gillon, Charles J. C., Navy	Taunton
Gilman, Charles S.	Boston
Glass, James	Framingham
Gleason, Benjamin W.	Athol
Goddard, Fred C.	Brighton
Godvin, Bernard A.	Boston
Goethals, Thomas R.	Boston
Goffin, John L. C.	Boston
Goldberg, M.	Lynn
Golden, Ross	Boston
Goldman, Ahbrum M.	Boston
Goldthwait, Joel E.	Boston
Goodall, Edwin B.	Boston
Goodall, Harry W.	Boston
Goodell, William	Springfield
Gooding, John H.	Boston
Goodpasture, Ernest W., Navy	Boston
Goodwin, James J.	Clinton
Gookin, Edward R.	Dorchester
Gordon, Louis	Boston
Gosline, Harold I.	Boston
Gould, Clarke S.	Norwood
Gould, James A.	Westboro
Goulding, Timothy F.	Boston
Grabfield, Gustave P.	Boston
Grady, J. E.	Leominster
Graham, James M.	Revere
Graham, J. Perry	Springfield
Graham, Otis L.	Boston
Grainger, Edward J.	Winthrop
Grandison, Louis J.	Charlestown
Granger, Frank B.	Boston
Grant, W. Herbert	Boston
Grasso, Antonio	Springfield
Graves, Benjamin A.	Dorchester
Gray, George H.	Lynn
Gray, Horace	Boston
Greaney, William F.	Holyoke
Green, Hyman	Dorchester
Green, Milo C.	Boston
Greene, D. Crosby	Newton Center
Greene, Edward C.	Northampton
Greene, Jeremiah A.	Cambridge
Greene, Ransom A.	Palmer
Greene, William H., Navy	Boston
Greenough, Robert B., Navy	Boston
Greenwood, Allen	Boston
Grieumard, George A.	Fitchburg
Guiler, Robert W.	Newton
Gunter, Fred C.	Somerville
Guthrie, Andrew D., Navy	Medford
Gwynne, Samuel C.	Worcester

H

Hadfield, Jonathan P.	Fall River
Haigh, Gilbert W., Navy	Worcester
Hale, Frank S.	Boston
Hale, William L.	N. Attleboro
Haley, Paul J. D.	Medford
Hall, Francis C.	Boston
Hall, John B.	Roxbury
Haller, David A.	Boston
Hamburg, Miles M.	Waltham
Hamilton, Albert J. A., Navy	Boston
Hamilton, Burton E.	West Roxbury
Hamlin, William E.	Waltham
Hammond, John W., Jr., Navy	Cambridge
Hammond, William J.	Dorchester
Hand, Edward P.	Holyoke
Handy, Harry T., Red Cross	Scituate Center
Hanley, Francis J.	Whitman
Hanlon, Morgan P., Navy	Cambridge
Hannon, Daniel F.	Pittsfield
Hanscom, Ridgeley F.	Newton Center
Hapgood, Lyman S.	Cambridge
Hardwick, Everett V.	Dorchester
Hardwick, Sydney C.	Quincy
Hardy, Wilbert C.	Boston
Harkins, Cornelius P.	Westfield
Harkins, William J.	Quincy
Harmer, Torr W.	Boston
Harriman, Cora E., Red Cross	Fram'gham Cr.
Harriman, David E.	Springfield
Harriman, Frank E.	Worcester
Harrington, Clifton W.	Everett
Harrington, Thomas F.	Boston
Harris, Carl T.	Boston
Harris, Charles E	Hyannis
Harris, Lorne W.	Cliftondale
Harris, Walter C. Navy	Millbury
Hart, Joseph S.	Lincoln
Hartmann, Gustave	Lynn
Hartnett, Edward D.	E. Boston
Harvey, John W.	Boston
Harvey, Samuel C.	Boston
Haskins, Abraham	Boston
Hassett, Leonard W.	Lynn
Hassman, David M.	Boston
Hatch, Ralph A.	Brookline
Hathaway, John G.	New Bedford
Hatt, Rafe N.	Boston
Havens, Leon C.	Boston
Haywood, Ralph W.	Salem
Healy, Thomas R., Navy	Newburyport
Hearn, Walter L.	Lynn

Heffernan, David A., Navy	Allston
Heffernan, Dennis W.	Holliston
Hegarty, Joseph G.	Boston
Henderson, George D.	Holyoke
Hewett, Arthur J.	Newburyport
Heywood, Nathaniel J.	Willimansett
Hibben, Freeman H.	Brookline
Hicks, George H., Jr.	Fall River
Higginbotham, Fred A.	Watertown
Higgins, George V.	Randolph
Hill, Ernest L.	Millis
Hilton, John J.	Lawrence
Hiltpold, Werner	Easthampton
Hinchey, Richard	Waltham
Hinchliffe, Frederick	Cohasset
Hirsch, Henry L.	Springfield
Hodgdon, Frank W., Jr.	Arlington
Hodgkins, Edward M.	Dorchester
Hodskins, Edward B.	Bernardston
Hodskins, Morgan B.	Palmer
Hoffman, Morris	Boston
Hoitt, Charles L.	Lynn
Holbrook, Bradbury	Waltham
Holbrook, Charles A.	Haverhill
Holden, Nebuther	Whately
Holland, Hubert T.	Jamaica Plain
Holland, William T.	West Roxbury
Hollings, Charles B.	Boston
Holmes, Arthur B.	Kingston
Holmes, F. G., Navy	Roxbury
Holzer, William F.	Winchendon
Homans, John	Boston
Hooker, Sanford B.	Boston
Hopkins, Bertrand H.	Ayer
Hopkins, Lawrence P., Navy	Somerville
Hopkins, Ralph H.	Boston
Horner, Albert A., Jr.	Boston
Horrax, Gilbert	Boston
Horrigan, Arthur J.	Holyoke
Horton, Waldo, Navy	Boston
Hosley, Walter A.	Springfield
Houston, David W., Jr.	Boston
Howard, Frederic H.	Williamstown
Howard, Harvey J.	Malden
Howard, Perez B.	Newtonville
Howe, George P., Died in service	Boston
Howe, Walter C.	Boston
Howes, Willard B.	Framingham
Hoyt, Dixi G.	Leominster
Hubbard, Joshua C.	Boston
Hubbard, R. F., Navy	Hatfield
Hudson, Carl B., Died in service.	Boston
Hughes, Edgar H.	Northampton
Hull, Eugene F., Died in service	W. Stockbridge
Hunt, Ernest L.	Worcester
Hunt, Robert B.	Arlington
Hunt, William E.	Bridgewater
Hunt, Wilson E.	Malden
Hurd, Albert G.	Millbury
Hurley, Daniel J.	Charlestown
Hussey, Charles B.	Franklin
Hussey, Earle E.	Fall River
Hussey, Edward J.	Holyoke
Hutchins, Henry T.	Newton Center
Hutchinson, Charles M.	Cambridge
Huyck, Clifford J.	W. Brookfield
Hyde, Harold V.	Boston
Hyman, Clarence H.	Boston

I

Ilsley, Frederick R.	Medford
Ireland, Allen G., Navy	Arlington
Irving, Frederick C.	Boston
Irwin, Grattan G., Navy	South Hadley Falls

J

Jackson, Arthur M.	Boston
Jackson, Howard B., Died in service	Melrose
Jackson, Howard L.	W. Springfield
Jackson, John P.	Fall River
Jackson, Sumner W.	Boston
Jacobson, Victor C.	Boston
James, Arthur P.	Boston
Janes, Benjamin F.	Northampton
Janney, James C.	Roxbury
Jenkins, Thomas L.	Topsfield
Jennings, C. H., Navy	Fitchburg
Jennings, John G.	Auburndale
Jensen, William C.	N. Reading
Jessaman, Leon W.	Framingham
Jewett, Everett P., Navy	Gardner
Jewett, Howard W.	Lowell
Jillson, Franklin C.	West Roxbury
Jillson, Walter A.	Westboro
Johnson, Alfred E., Jr.	Greenfield
Johnson, Erik St. J.	New Bedford
Johnson, Harold A.	Lynn
Johnson, Herbert L.	Roxbury
Johnson, J. B. Albert	Lowell
Johnson, Kenneth	Pittsfield
Johnson, Leighton	Norwood
Johnson, Lewis W., Navy	Greenfield
Johnson, Peer P.	Beverly
Johnston, Clyde C.	Springfield
Johnston, James S.	Boston
Johnston, William	Dorchester
Jones, Basil B.	Boston
Jones, Daniel F.	Boston
Jones, Frank L.	Chatham
Jones, Fred D.	Springfield
Jones, Frederick E.	Quincy
Jones, Glenn I.	Ayer
Jones, Raymond C.	Fitchburg
Jones, Robert L.	Lowell
Jones, Thomas P.	Roxbury
Jordan, John F.	Peabody
Jordan, Michael M.	Westboro
Joslin, Elliott P.	Boston
Joslyn, Arthur E.	Lynn
Jouett, Fred R.	Cambridge
Judd, Ernest H.	Springfield
Judkins, Charles L. M.	Lynn

K

Kane, William V.	Lynn
Kaplovitch, Henry	Haverhill
Kau, En Young	Boston

Kauffman, Arnold B.	Boston
Kaufman, Morris F.	Norwood
Kaufmann, Samuel B.	Fall River
Keaney, Henry J.	Everett
Kearney, John H.	Fitchburg
Kearney, Joseph P.	Lowell
Keegan, John J., Navy	Boston
Keenan, George F.	Brighton
Keenan, James A.	Boston
Kelleher, Simon B.	Cambridge
Kelley, Robert E. S., Navy	Mattapan
Kellogg, Foster S., Red Cross	Boston
Kelly, John J.	Marlboro
Kelly, John M.	Dorchester
Kemmerer, Theodore W.	Boston
Kemp, H. M.	Greenfield
Kemp, Lysander S.	Canton
Kendall, Miner R.	Boston
Kennedy, Thomas J., Navy	South Hadley
Kenney, Clarence B.	Winchendon
Kenney, Thomas F.	Worcester
Kenney, Thomas H.	Northampton
Keown, James A.	Lynn
Kepler, Charles O.	Boston
Kerr, William J.	Boston
Kerrigan, Joseph H.	Stoneham
Kewer, Leo T.	Waverley
Kibby, Sydney V.	Chelsea
Kilroy, Philip	Springfield
King, Alfred E.	Watertown
King, Donald S.	Boston
King, Edward	Boston
King, Frederick A.	Boston
King, Nicholas J.	Roslindale
Kinnicutt, Roger	Worcester
Kinsley, William G.	Boston
Kirby, H. C.	New Bedford
Kirkpatrick, George H.	Lynn
Kirkwood, Allan S.	Newton Center
Kissock, Robert J.	Boston
Klein, Armin	Boston
Knowles, Edward A.	Medford
Knowles, William F.	West Newton
Knowlton, Edward A.	Holyoke
Koefod, Hilmar O.	Boston
Konikow, Moses J.	Roxbury
Krasnye, John F.	Lowell
Kreutzmann, Henry A. R.	Boston

L

Lacey, Walter H.	Boston
Laczynski, Francis S.	Holyoke
Ladd, Maynard, Red Cross	Boston
Lafortune, W. T.	Fitchburg
Lahey, Frank H.	Boston
Lake, LaFayette	Cambridge
LaLiberté, Elie J.	Fall River
Lally, Francis H.	Milford
Lally, William J.	Pittsfield
Lambert, John H.	Lowell
Lancaster, Walter B.	Brookline
Landers, Thornton A.	Somerville
Lane, Clarence G.	Woburn
Lane, Clayton R.	Fitchburg
Lane, John W.	Boston
Lane, Walter A.	Milton
Lanman, Thomas H.	Boston
Lanois, Esdras J., Navy	Northboro
Lanpher, Howard A.	Chester
LaRivière, Evariste	New Bedford
LaRochelle, Arthur H.	Springfield
Latham, Benoni M.	Mansfield
Laurence, Joseph H.	Brockton
Lawlor, James F.	Beverly
Lawrence, Charles H.	Brookline
Lawrence, Howard F., Navy	Falmouth
Lazarus, Louis	Worcester
Leary, Alfred J.	Boston
Leavitt, Frank C.	Belmont
Leavitt, Peirce H.	Cambridge
LeBoeuf, Joseph F.	Fall River
LeClair, H. H., Navy	New Bedford
Ledbury, John W., Jr.	Uxbridge
Lee, Roger I.	Cambridge
Lee, Wesley T.	Brookline
Leib, Edwin Roy	Worcester
Leith, Richard B.	Lawrence
LeLacheur, Ellis S.	W. Bridgewater
Leland, George A., Jr.	Boston
Leland, Harold L.	Lowell
Lemaire, Willard W.	Worcester
Lemaire, William F.	Lynn
Lemay, Alfred M.	Brockton
Lena, Hugh F., Navy	Boston
Lentine, Gaspare E.	Hanson
Leonard, William J.	Springfield
Levek, Joseph A.	Lawrence
Leverton, Reuben L.	Boston
Levins, Nathan N.	Boston
Lewis, Arthur C.	Fall River
Lewis, Elisha S.	Springfield
Lewis, Frank E.	Nantucket
Libby, J. Herbert	E. Weymouth
Liberti, Angelo	Boston
Light, Emmet E.	E. Longmeadow
Limauro, Louis H.	Lynn
Lincoln, George C.	Worcester
Lincoln, Merrick	Worcester
Lindquist, Carl A.	Boston
Lindsay, John C., Navy	Tewksbury
Lindsey, John H.	Fall River
Lipsitt, Charles S., Navy	New Bedford
Little, Abby N., Red Cross	Newburyport
Little, George T.	Uxbridge
Littlewood, Thomas	Pittsfield
Livingston, Clarence B.	Lowell
Ljungberg, David G.	Worcester
Loewe, Walter R., Navy	Chelsea
Long, Rufus W.	Boston
Lord, Frederick T., Red Cross	Boston
Lord, Robert M.	Boston
Loring, Robert G.	Boston
Lougee, John L.	Boston
Lovesey, Burton E.	Lowell
Lovett, Robert W.	Boston
Lowe, Thomas S.	Ft. Rodman
Lowe, W. R., Navy	Dorchester

Lowney, Dennis J.	New Bedford
Lowry, Franklin P.	Newton
Lucas, Julian D.	Roxbury
Luce, Dean S.	Canton
Luftig, Jacob	Roxbury
Lund, Fred B.	Boston
Lupien, Henry J.	Brockton
Lurie, Moses H.	Roxbury
Lurier, Israel	Worcester
Lyman, Henry	Boston
Lynch, Charles F.	Springfield
Lynch, Henry E.	Holyoke
Lynch, Joseph M.	Boston
Lyon, Arthur B.	Boston
Lyon, James A.	Boston

M

MacAusland, Andrew R.	Boston
MacDonald, D. F.	Taunton
MacFadyen, J. A.	Worcester
MacIntyre, William A.	**N. Grafton**
MacIver, George A.	Boston
MacKay, William H.	Worcester
MacKnight, Richard P.	Fall River
MacKnight, William F.	Fall River
MacLeod, Harry F.	Dorchester
MacMichael, Earl H.	Malden
MacMillan, Alexander S.	Boston
MacNaughton, Wallace F.	Boston
MacPhail, John G., Navy	Chelsea
MacPherson, Donald J.	Boston
McAlevey, George W., Red Cross	Lynn
McAllister, Frederick D.	Lawrence
McAuslan, James L.	Gardner
McBain, William H.	Malden
McCaffrey, Jerome J.	Attleboro
McCann, Charles D.	Brockton
McCann, William S.	Boston
McCarthy, Charles A., Navy	Lawrence
McCarthy, Charles D., Jr.	Malden
McCarthy, Eugene J.	Malden
McCarthy, Louis F.	Malden
McCarthy, Patrick T.	Boston
McCauley, A. A.	Boston
McClure, C. W.	Boston
McConnell, David J.	Greenfield
McCormack, John S.	Jamaica Plain
McCormick, John J.	Woburn
McCormick, William A.	New Bedford
McCrudden, Francis H.	Boston
McDonald, Frederick L., Red Cross	Waltham
McDonald, Harry L.	Attleboro
McDonald, John F., Navy	Lynn
McDonald William J.	Brookline
McFadden, James F.	Foxborough
McFee, William D.	Haverhill
McGann, Pierce P.	Somerville
McGillicuddy, Cornelius J.	Boston
McGillicuddy, J. T.	Worcester
McGraw, Andrew J.	Taunton
McGuire, Joseph H.	Boston
McKechnie, Fred J.	Springfield
McKenna, Peter G.	Canton
McLaughlin, Arthur O.	Haverhill
McLaughlin, English N.	Newton
McLean, John A.	W. Somerville
McMahon, Francis J.	Brookline
McMahon, M. F.	Worcester
McMahon, William T.	Pittsfield
McMahon, William H.	Jamaica Plain
McNamara, John I.	Taunton
McNamara, John J.	Brockton
McPherson, George E.	Medfield
McPherson, William E.	Canton
McQuade, Lewis S.	Dorchester
McQuesten, Philip	**Boston**
McVey, F. J	Dorchester
McWilliams, Norman B.	Williamstown
Mabon, Thomas McC.	Boston
Macaluso, Anthony, Navy	Dorchester
Macomber, Donald	West Newton
Magie, Burtis	Boston
Maguire, John F.	Jamaica Plain
Mahoney, Daniel F.	Boston
Mahoney, John F.	New Bedford
Mahoney, John L.	Boston
Mahoney, Matthew P.	Lowell
Mahoney, Walter F.	Westboro
Mahony, Francis R.	Lowell
Mains, Charles F.	Ashmont
Mains, Herbert L.	Danvers
Malone, Charles	Jamaica Plain
Maloney, John M.	Springfield
Malonson, James H.	Gloucester
Mann, Henry L.	Boston
Mannix, Louis E.	Chicopee Falls
Mara, Joseph L.	Brockton
Marble, Henry C.	Boston
Marcy, Henry O., Jr.	Newton
Marlow, Searle B.	Boston
Marnoy, Samuel L.	Chelsea
Marr, Myron W., Red Cross	Dorchester
Marr, Robert M.	Westfield
Marshall, John R., Navy	Brookline
Marston, Warren W.	Newton
Martin, David L.	Dorchester
Martin, Harry C.	Springfield
Martin, John F.	Boston
Marvin, Frank W.	Boston
Maskell, Leonard J.	Newton
Mason, Gilbert M.	Boston
Mason, Nathaniel R.	Boston
Mather, John A., Navy	Colrain
Mathes, Roy W., Navy	Lynn
Mathewson, Frank W.	New Bedford
Maxfield, George H.	Chelsea
May, James V.	N. Grafton
May, John B.	Cohasset
May, John S.	Roxbury
Mayhew, Orland S.	Vineyard H'v'n
Maynard, Herbert E.	Winchester
Mead, Frederick A.	Willimansett
Means, James H.	Boston
Medalia, David B.	Boston
Medalia, Leon S.	Boston
Medlar, Edgar M.	Boston
Meehan, Patrick J.	Lowell

Merrill, Adelbert S.	Boston
Merrill, Charles H.	Lynn
Merrill, Clyde H.	Marlboro
Merrill, Everett A.	E. Lynn
Merrill, William H.	Lawrence
Merritt, Edward L., Navy	Fall River
Merritt, Robert E.	Wollaston
Merritt, Victor S.	Springfield
Meserve, Edwin A.	Watertown
Messer, Edward R., Navy	Pittsfield
Metcalf, Ben H.	Winthrop
Metzger, Butler	Lynn
Meyer, Carl E.	Chicopee
Meyer, Edward J.	Somerville
Miller, Percy F.	Harwich
Miller, Richard H.	Boston
Millet, John A. P.	Boston
Millett, Frank A.	Greenfield
Milot, Joseph D.	Fall River
Milot, Wilfrid F.	Attleboro
Mills, Alfred E.	Somerville
Miniter, Francis G., Navy	Medford
Mitchell, Frank W. A.	E. Lynn
Mixter, Charles G.	Boston
Mixter, Samuel J.	Boston
Mixter, William J.	Boston
Moline, Charles	Sunderland
Mollica, Zachary A.	Boston
Moloney, J. B., Navy	South Boston
Monahan, Edward J.	Revere
Moncrieff, William A.	New Bedford
Montgomery, James B.	Boston
Moore, Frederick P.	East Norfolk
Moore, George A.	Brockton
Moore, Howard	Newton
Mooring, Scott W.	Gloucester
Moran, Andrew C.	Fall River
Moran, Charles L., Navy	Roxbury
Morgner, Richard A.	Fitchburg
Moriarty, Patrick M.	Springfield
Morin, Romeo J.	Ayer
Morris, Ernest M.	Fall River
Morris, Samuel L., Jr.	Boston
Morrison, Lawrie B.	Roxbury
Morrison, William R.	Boston
Morriss, William S., Died in service.	Fall River
Morse, Almon G.	Boston
Morse, Frank L.	Somerville
Morton, John J.	Boston
Mosher, Harris P.	Boston
Mossman, George	Westminster
Mott, George E., Navy	Lynn
Moulton, Allen T.	Roxbury
Moulton, Starr A.	Winthrop
Mulcahy, William E.	Springfield
Mulhern, Joseph P.	Worcester
Munro, Donald	Milton
Murphy, Daniel F.	Beverly
Murphy, Edward F.	Roxbury
Murphy, Frank A.	Taunton
Murphy, James M.	Palmer
Murphy, John J.	Cambridge
Murphy, John M.	Brockton
Murphy, Joseph L.	Taunton
Murphy, Thomas William	Lawrence
Myers, Franklin A.	Boston
Myrick, Alfred W.	Randolph

N

Naumann, Albert A.	Springfield
Neal, Kemp P.	Boston
Nevers, Harry H.	Lawrence
Newhall, Avery L.	W. Lynn
Newman, Leon	Jamaica Plain
Newton, Edward R., Navy	Somerville
Newton, Roland S.	Westborough
Newton, William C., Navy	Revere
Nichols, Andrew, 3rd	Hathorne
Nichols, Edward H.	Boston
Nichols, Nelson E.	Boston
Nichols, Paul F.	Malden
Nielson, Edwin B.	West Newton
Nightingale, James	Worcester
Nisbet, Douglas H.	Boston
Noel, Henry L.	Lexington
Noonan, William A. Navy	Cambridge
Norbury, Frank G.	Boston
Norris, Rolf C.	Methuen
Norton, Thomas J.	Pittsfield
Nowell, Howard W.	Boston
Noyes, John R.	Brockton
Noyes, Nathaniel K.	Duxbury
Nye, Robert N.	Springfield

O

Ober, Frank R.	Boston
Ober, Ralph B.	Springfield
Oberg, Frank T.	Worcester
O'Brien, Charles T.	Woburn
O'Brien, D. P.	New Bedford
O'Brien, Francis E., Navy	Northampton
O'Brien, Fred W.	Boston
O'Brien, John F.	Fall River
O'Brien, Thomas J. Navy	Westboro
O'Connor, Arthur M.	Housatonic
O'Connor, Dennis F.	Worcester
O'Connor, Patrick H.	New Bedford
O'Connor, William H., Navy	Dorchester
O'Day, Sylvester F.	Ft. Andrews
O'Dea, Patrick J.	Attleboro
Odeneal, Thomas H.	Beverly
O'Donnell, John J.	Boston
Oeser, Paul R.	Lawrence
Ohler, William R.	Boston
O'Keefe, Edward S.	Lynn
Olin, Harry	Roxbury
Oliver, Everard L.	Westwood
O'Malley, Edward F.	Fitchburg
O'Mara, John W.	Worcester
O'Neil, Richard F.	Boston
Ordway, Charles A., Died in service	Everett
O'Reilly, Francis A.	Lawrence
Orr, S. Sanford	Weston
Osborn, Stanley H.	Cambridge
Osgood, George	Cohasset
Osgood, Howard	Boston
Osgood, Robert B.	Boston

O'Sullivan, Francis A.	Lowell
Otis, Edward O.	Boston
Otis, Israel S., Navy	Chelsea
Otis, Walter J.	Waverley
Overholser, Winfred	Westboro
Overlander, John C.	Springfield
Owen, Albert S.	Framingham

P

Packard, George B., Jr.	Boston
Paglia, Jeremiah J.	Worcester
Paine, Alonzo K.	Boston
Palfrey, Francis W.	Boston
Palmer, Walter W.	Boston
Papen, George W.	E. Boston
Papoulacos, Panagiotis M.	Boston
Parcher, George C.	Saugus
Park, James H., Jr.	Boston
Parker, Charles C., Jr.	Roxbury
Parker, Frederick, Jr.	Boston
Parker, Harold F.	Boston
Parker, Raymond B.	Winthrop
Parker, Willard S.	Boston
Parkhurst, Guy McM.	Cambridge
Parlow, George G.	Fall River
Parris, Roland O.	Brookline
Partington, Cyrus B.	Fall River
Pascoe, James B.	Hull
Pastene, Albert A.	Boston
Paul, Benjamin D.	Boston
Payne, James H., Navy	Boston
Peabody, Charles W.	Boston
Peabody, Francis W.	Cambridge
Pearce, Arthur C.	Boston
Pease, Charles W.	Needham
Pease, Lewis W.	Weymouth
Peck, Martin W.	Lynn
Peck, Roy H.	Springfield
Peirce, George A.	Tewksbury
Pelletier, J. E.	Worcester
Penhallow, Dunlap P.	Boston
Percy, Karlton G., Red Cross	Brookline
Perkins, George E.	Boston
Perkins, Hamilton C.	South Boston
Perkins, Roy S.	Lowell
Perry, Arthur P.	Jamaica Plain
Perry, Charles E.	Northampton
Perry, Herbert B.	Northampton
Perry, Walter L.	Worcester
Persons, Carl C.	New Bedford
Peter, Alphonse	Newburyport
Peters, John D.	Gt. Barrington
Peterson, Arthur F.	Pittsfield
Pettengill, Warren M.	Boston
Pettey, John A.	Brockton
Pfeiffer, Albert	Lexington
Phaneuf, Josephat S.	Brockton
Phaneuf, Louis E.	Boston
Phelan, Edward F., Died in service	N. Brookfield
Philbrick, Roscoe H.	E. Northfield
Phillips, John C.	Wenham
Phipps, Cadis	Boston
Pierce, Appleton H.	Leominster
Pierce, Bradford H., Navy	Cambridge
Pierce, Reuel A.	Canton
Pike, Forrest F.	Melrose
Pillsbury, Ernest D.	Somerville
Piper, Frank	Boston
Pitcher, Hervey B.	Fitchburg
Plouffe, B. L.	Webster
Plumb, Darley G.	Melrose
Plummer, Frederic H.	Chelsea
Poirier, George H.	Boston
Pomeroy, Carl T.	Melrose Hlds.
Pomeroy, Harris S.	Peabody
Pond, Dallas, Navy	Chelsea
Porter, Charles T.	Boston
Pote, Leonard H.	Somerville
Potter, A. Carleton	Cambridge
Powers, George H.	Boston
Powers, Harris E.	Boston
Pratt, Emily A., Red Cross	Boston
Pratt, Ezekiel	Arlington
Pratt, Joseph H.	Brookline
Prentice, Donald D., Navy	Pittsfield
Priest, Herbert B.	Ayer
Proctor, Grover C.	Boston
Proctor, Thomas M.	Wrentham
Prouty, Albert H.	N. Brookfield
Provost, Raoul G.	New Bedford
Pulsifer, Nathan	Lowell
Pulsifer, Walter H.	Whitman
Puskunigis, F. B.	Worcester
Putnam, James J., Jr.	Boston

Q

Quackenboss, Alexander	Boston
Quennell, Willard L.	N. Cambridge
Quimby, Howard L.	Gloucester
Quinn, James H.	Springfield
Quirk, Thomas C., Navy	Watertown
Quist, F. Julius	Worcester

R

Rabinovitz, Bernard	Springfield
Rackemann, Francis M.	Boston
Radding, Moses B.	Springfield
Raeder, Oscar J.	Boston
Rafferty, Thomas B.	Lynn
Randall, John A., Died in service	Myricks
Rapport, David L.	Boston
Rattey, Arthur A.	Lawrence
Rauscher, Raymond	Lawrence
Raymond, Albert C.	Worcester
Reardon, Daniel B.	Quincy
Redden, William R., Navy	Boston
Reed, Carlisle	Boston
Reed, Victor A.	Lawrence
Reese, John A.	Boston
Regan, Edward F.	Framingham
Regan, James J., Navy	Dorchester
Regan, William F., Navy	Chelsea
Regan, William H.	Cambridge
Reid, William D.	Newton
Rice, Allen G.	Springfield
Rice, George A.	Boston
Rice, Robert A.	Fitchburg
Richardson, Edward P.	Boston

Richardson, Ira W.	Wakefield
Richmond, Ernest D.	Reading
Riggs, Austin F.	Stockbridge
Riley, Augustus	Boston
Riley, Charles A.	Boston
Riley, Joseph H. H	Boston
Ring, Arthur H.	Arlington Hts.
Riordan, Arthur H., Navy	Indian Orchard
Ripley, Harold W.	Boston
Ripley, Horace G.	Taunton
Risley, Edward H.	Boston
Risley, John N., Navy	New Bedford
Ritter, Henry	Springfield
Robb, Hunter	Winchester
Robert, George C.	Holyoke
Roberts, Wyatt S.	Boston
Robertson, Charles W.	North Dana
Robertson, Oswald H.	New Bedford
Robey, William H., Jr.	Boston
Robie, Walter F.	Baldwinsville
Robinson, Henry A.	Marlboro
Rochford, Richard A.	Springfield
Rock, John C.	Marlboro
Rockwell, Herbert G.	Amherst
Rockwell, J. Arnold	Cambridge
Rockwell, Llewelyn H.	Roxbury
Roderick, Anthony J.	New Bedford
Roderick, Charles E.	Taunton
Rodger, James Y.	Lowell
Rodrick, Albert F.	Boston
Rogers, Edmund A.	Brookline
Rogers, John A.	Lowell
Rogers, Lester B.	Orange
Rogers, Mark H.	Belmont
Rogers, Orville F., Jr.	Dorchester
Rollins, Francis T.	East Boston
Rood, Adulphus D.	Whitman
Root, James H.	Boston
Root, Raymond R.	Georgetown
Rosen, Edward	Cambridge
Rosenau, Milton J., Navy	Brookline
Rosenberg, Nathan	Boston
Rosser, Curtice M., Navy	Boston
Rowe, Carlton A.	Milton
Rowley, Philip W., Navy	Gloucester
Rudman, Benjamin W.	Boston
Rudman, Israel E.	New Bedford
Ruel, Joseph A.	Haverhill
Ruggles, Edwin P.	Dorchester
Ruisi, John E.	South Boston
Rumage, William T.	Dorchester
Rumrill, Samuel D.	Springfield
Rushford, Edward A.	Salem
Ruston, Warren D.	W. Somerville
Ryan, Sylvester E.	Springfield
Ryan, William F.	Lowell
Ryan, William P.	Holyoke
Ryder, Charles E., Navy	South Boston
Ryder, Walter I., Navy, Died in service	Boston

S

Sadler, Roy A.	Boston
Saeger, Ernest T.	Brookline
St. Antoine, Henry E.	Jamaica Plain
St. Clair, Austin E.	Framingham
St. George, Wilfred M.	Holyoke
Salerno, Louis F.	East Boston
Salmon, Charles A.	Worcester
Sanborn, Frederick R.	Lynn
Sanborn, John W.	Roxbury
Sandler, Frank F.	Revere
Saphirstein, Hyman, Navy	Boston
Sargent, Arthur	Boston
Sarno, Avery H., Navy	Boston
Savage, Joseph C.	Boston
Sawyer, Alpha R.	Roslindale
Sawyer, Edward J.	Boston
Sayles, Joseph B.	Taunton
Scales, Robert B.	Dorchester
Scanlan, Joseph M.	Lawrence
Scanlan, Thomas J.	Dorchester
Scannell, David D.	Boston
Scannell, Edward J.	Chelsea
Schadt, George L.	Springfield
Schillander, Carl A.	Springfield
Schirmer, J. Walter	Boston
Schley, William S.	Lynn
Schnack, Adolph G. C.	Cambridge
Schneider, Harry A.	Pittsfield
Schofield, Otho L.	Wellesley
Schofield, Roger W.	Worcester
Schwartz, George H.	Boston
Scott, Norman M.	Boston
Sears, Frederick M., Navy	Dorchester
Sears, Harry E.	Beverly
Secord, Walter N., Navy	Newton
Sedgley, Frank R.	West Roxbury
Segal, Joseph	Boston
Segal, Samuel, Jr., Navy	Haverhill
Segall, Samuel K.	New Bedford
Seibels, Robert E.	Springfield
Sellards, Andrew W.	Boston
Sellew, Robert C.	New Marlboro
Senecal, Raymond E.	New Bedford
Sewall, C. Wesley	Jamaica Plain
Sexton, Frank J.	Brookline
Seymour, Malcolm	Boston
Seymour, Wilmarth Y.	Bridgewater
Shapiro, Albert A.	Boston
Sharp, Robert G., Red Cross	Boston
Sharry, Charles F.	Somerville
Shattuck, George C., British Service	Boston
Shaughnessy, Thomas A.	Leominster
Shaw, Francis	Somerville
Shaw, Frederick K.	Acton
Shaw, John H.	Plymouth
Shay, Charles E., Navy	Roxbury
Shea, Andrew F.	Lawrence
Sheahan, George M.	Quincy
Shealey, M. J.	Westborough
Sheehan, Edward B.	Roxbury
Sheehy, Richard M.	Winchester
Sheehy, William C.	New Bedford
Sheldon, Russell F.	Boston
Shepherd, William G., British Service	Lynn
Shepley, Luther J.	Fall River
Sheppard, Glen A., Navy	Chelsea

Sherman, George E.	Cambridge
Sherman, Warren H.	Graniteville
Shields, Ellwood E., Navy	Gloucester
Shields, Warren S.	Boston
Shine, Timothy E.	Worcester
Shinn, Philip A., Navy	Gloucester
Shirk, George W.	Hatfield
Shoenfeld, Dudley D., Navy	Chelsea
Shortell, Joseph H.	Boston
Shultis, Frederick C.	Leominster
Shurtleff, Percy A.	Blandford
Silverman, Max, Navy	Brockton
Simmons, Edward B.	Worcester
Simmons, Hugh L.	Worcester
Simmons, Ralph H.	Fall River
Simmons, Manfred E.	Boston
Simonds, Frederick A.	Cambridge
Simons, Sigmund, Navy	Chelsea
Simpson, Joseph	Beverly
Sims, Frederick R.	Melrose
Sinclair, Donald B.	Williamstown
Sise, Lincoln F., Navy	Medford
Sisson, Warren R.	Boston
Skirball, Joseph J.	Boston
Skirball, Louis I.	Revere
Slate, Ames W.	Springfield
Sleeper, Frank W., Navy	Dorchester
Small, Albert E.	Melrose
Small, Ernest W.	Belmont
Smith, Alfred C.	Brockton
Smith, Edwin E.	Quincy
Smith, Edwin W.	Newton
Smith, Erdix T.	Springfield
Smith, Ernest E.	Webster
Smith, George G.	Boston
Smith, Hervey L.	Springfield
Smith, John J.	Cambridge
Snow, Frank W.	Newburyport
Solomon, Harry C.	Jamaica Plain
Solomon, Sidney J.	Boston
Souter, William N.	Boston
Souther, Robert F.	Boston
Sowles, Horace K.	Boston
Spaulding, John D.	Boston
Spear, Lewis M.	Boston
Spellman, Martin H.	Whitman
Spencer, Oscar L.	Lynn
Spillman, Ramsay, Navy	Boston
Spooner, Lesley H.	Boston
Spruit, Charles B.	Boston
Staatz, Karl S.	Worcester
Stacey, Winthrop D.	Charlestown
Stack, John J.	Boston
Stansfield, Clarence W.	Fall River
Stansfield, Oliver H., British Service	Worcester
Stanwood, Frederic A.	Wellesley Hills
Stapleton, Willard P.	Worcester
Stearns, Albert W., Navy	Billerica
Stearns, Robert T.	Mattapan
Steele, George L.	W. Springfield
Stern, Newton S.	Jamaica Plain
Stetson, Frank E.	New Bedford
Stevens, Charles E.	Worcester
Stevens, Franklin A.	Boston
Stevens, Harold W.	Boston
Stevens, Henry B.	West Roxbury
Stevens, Horace P., Navy	Cambridge
Stevens, William R.	Abington
Stewart, Harrison M.	Pittsfield
Stick, Henry L.	Worcester
Stickney, Whitman G.	Beverly
Stiles, Fred M.	Waltham
Stoddard, James K.	Boston
Stoddard, James L.	Boston
Stoddard, Mortimer J.	Springfield
Stone, George H.	Roslindale
Stone, James S.	Boston
Stone, Thomas N.	Haverhill
Stowe, Irving E., Navy	Brookline
Strahlmann, Louis	Boston
Strammer, Myron A.	Jamaica Plain
Street, Charles E.	Springfield
Streeter, Edward C.	Boston
Streeter, Howard A.	Pittsfield
Streeter, John F.	Springfield
Strong, Richard P.	Boston
Sturgis, Cyrus C.	Boston
Sturgis, Walter H.	Hull
Sughrue, Dennis F.	Roxbury
Sullivan, Andrew J., Navy	Brockton
Sullivan, Arthur J.	Fall River
Sullivan, Daniel J.	South Boston
Sullivan, Edward C.	Springfield
Sullivan, John A.	Pittsfield
Sullivan, Joseph C.	Webster
Sumner, Harry H.	Lowell
Surls, Joseph K.	Brookline
Sussler, David	Dorchester
Swan, Laurence C.	Beverly
Sweeney, Edward J.	Springfield
Sweeney, John G.	North Cohasset
Sweeney, Michael T.	Quincy
Swope, Oscar C.	Kingston
Sylvester, Charles P.	Boston

T

Taber, Thomas H., Navy	New Bedford
Tabor, Edward O.	Lowell
Tate, Harry J.	Pittsfield
Taylor, John D.	East Boston
Taylor, John H.	Cambridge
Taylor, Roy A.	Waltham
Taylor, William J.	East Dedham
Teague, Oscar	Boston
Tellier, Ernest	N. Attleboro
Temple, William F., Jr.	Boston
Tenney, William N.	Canton
Tetrault, Charles A.	Southbridge
Thaxter, Langdon T.	Boston
Thom, Douglas A.	Worcester
Thomas, Abraham F.	Newburyport
Thomas, Arthur W.	Boston
Thomas, Elmer F.	Northampton
Thomas, Harold	Wollaston
Thomas, Henry M., Jr.	Boston
Thomas, John J.	Boston

Thomas, William K. S. .... Cambridge
Thomes, John B. .... Pittsfield
Thompson, Charles E. P. .... Fairhaven
Thompson, Richard H. .... Malden
Tierney, Thomas F. .... Hudson
Tinkham, Oliver G. .... Boston
Tobey, George L., Jr. .... Boston
Tobey, Harold G. .... Boston
Tomb, Everett H. .... Cambridge
Tooker, Harold C. .... Boston
Topham, John J. .... Lowell
Torbert, James R. .... Boston
Towne, Edward B. .... Boston
Townsend, David .... Brookline
Tracy, John M. .... Springfield
Trask, Harry W. .... W. Boylston
Trask, John W. .... Lynn
Treanor, John P. .... Dorchester
Treichler, Albert J. .... Springfield
Trickey, Charles L., Navy .... Tewksbury
Truesdale, Philemon E. .... Fall River
Trueman, Nelson G. .... Salem
Tucker, Cassell C. .... Boston
Tucker, Willis L. .... Hinsdale
Tully, George L., Navy .... South Boston
Tully, George W. .... Southbridge
Turner, Henry C., Jr. .... Norwood
Turner, Ralph W. .... Boston
Turner, William G., Died in service .. Fall River
Turner, William K. .... New Bedford
Tuttle, Howard K. .... South Acton
Twigg, Nial F., Died in service .... Brockton
Tyler, Winsor M. .... Lexington

U

Ullian, Louis J. .... Boston
Underhill, Samuel G. .... Lynn
Underwood, George B. .... North Reading
Upton, Charles L. .... Shelburne Falls

V

Valentine, John F. .... Danvers
Vamvas, Anthony D. .... Boston
Van Camp, Thomas H. .... Boston
Van Gorder, George W. .... Brookline
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Von Meysenbug, Ludo, Navy .... Boston
Vose, Robert H. .... Boston
Vose, Samuel N. .... Boston
Voss, J. William .... Beverly

W

Wainshel, Perez .... Lynn
Walcott, William W., Died in service. Natick
Walker, Harry A. .... Somerville
Walker, Melvin H., Jr. .... Pittsfield
Walker, Robert I. .... New Bedford
Walker, Waldo W. .... W. Somerville
Wallace, Harold L. .... Allston
Walsh, Edmund F. .... Boston
Walsh, James J. .... Lexington
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Ward, Edward S .... N. Attleboro
Ward, John C. .... Worcester
Ward, Roy J. .... Worcester
Warden, Ralph A. .... Boston
Warren, Charles F. .... Amesbury
Warren, John .... Boston
Washburn, Chester A., Red Cross .... Springfield
Washburn, Frederic A. .... Boston
Waterhouse, Robert M., Navy .... Newton
Waters, James E. .... Gardner
Watkins, Harvey M. .... Palmer
Watt, Charles H. .... Fall River
Watt, George .... Worcester
Watts, Henry F. R. .... Dorchester
Wearn, Joseph T. .... Boston
Webber, Wolfert G. .... Needham
Webster, Frederick A. .... Boston
Webster, John B. .... New Bedford
Weiser, Walter R. .... Springfield
Welbourn, Marshall A. .... Boston
Wellington, Anna C., Red Cross ..... Boston
Wells, Orion V., Died in service. .... Westford
Wentworth, Arthur H., Red Cross .... Boston
Wentworth, John A. .... Roxbury
Wesselhoeft, Conrad .... Boston
Wesselhoeft, W. F. .... Boston
West, Frederick O. .... Woburn
Wetherell, Bryant D. .... Holyoke
Wheatley, Frank E. .... N. Abington
Wheatley, Frank G. .... N. Abington
Wheeldon, Thomas F. .... Boston
Wheet, Harry R. .... Springfield
Whelan, Charles .... Hingham
Whelan, Edmond V., Navy .... Bridgewater
Whipple, George C., Red Cross ...... Cambridge
Whitaker, Harper E., Navy .... Gloucester
Whitcomb, Clarence A., Navy .... Malden
White, Frank S. .... Milford
White, George A. .... Cambridge
White, Henry A. .... Taunton
White, John R., Navy .... Lynn
White, Joseph W., Navy .... Boston
White, Paul D. .... Boston
Wickham, Thomas W. .... Boston
Wiggin, Ralph C. .... Boston
Wiggin, William I., Red Cross ...... Lowell
Wilbur, George B. .... Boston
Wilcox, Charles F., Jr. .... Boston
Wilcox, John M., Navy .... Brookline
Wilde, Salmon P. .... New Bedford
Wilbout, Sterling E. .... Boston
Wilkins, George A .... Revere
Willey, Walter B., Jr. .... Brighton
Williams, David L. .... Boston
Williams, Frank P. .... Boston
Williams, Fred R. .... Worcester
Wilson, Charles H. .... Chelsea
Winslow, Edward S. .... Easthampton

Wislocki, George B.	Boston
Wiswall, Edward H., Died in service	Wellesley
Withee, Frederick E.	Newton Hl'ds.
Withington, Alfreda B., Red Cross	Pittsfield
Withington, Paul R.	Boston
Wolff, B. M., Red Cross	Boston
Wood, William F.	Boston
Woodard, James M.	Salem
Woods, Alan C.	Boston
Woodworth, John D. R.	Jamaica Plain
Woody, McIver	Boston
Worcester, Alfred, Red Cross	Waltham
Worthington, Arthur M.	Dedham
Wright, Charles W.	North Adams
Wright, James H.	Brookline
Wright, Wade	Boston
Wright, Willard L.	Boston
Wyant, John	Boston
Wyman, Edwin T.	Boston
Wyman, John H.	Medway

Y

Yeamans, Herbert W.	Boston
Yerbury, Charles C.	Springfield
Yoosuf, Abraham K.	Worcester
Young, Edward W.	New Bedford
Young, Ernest B.	Boston
Young, William B.	Cambridge

Z

Zimmerman, Henry	Springfield

Book Reviews.

American Red Cross. Textbooks on First Aid. Second Editions. By Colonel C. Lynch. *Home Hygiene and Care of the Sick.* By Jane A. Delano, R.N. Philadelphia: P. Blakiston's Son & Company. 1918.

The American Red Cross has recently endorsed the publication of three useful textbooks, two dealing with first aid, and the third with home hygiene and care of the sick. Of the first aid books, one is for general use and the other has been compiled particularly to fill the need of women who desire to learn how to deal intelligently with ordinary injury and illness. The editions are in part identical, as the essential facts of first aid treatment are always the same; but it has been found advantageous to adapt the information available to the needs of particular classes.

The general edition describes the structure and mechanics of the body, and gives directions for giving aid to persons suffering from shock, sprains, dislocations, fractures, wounds, or from injuries due to heat and cold. Methods of administering artificial respiration, and measures applicable to more common emergencies are explained. A chapter discussing war first aid is of practical value and also of general interest.

The edition issued primarily for women is similar to the general edition and in it may be found all that is necessary for a woman to know in order to render intelligent first aid treatment. The admirable progress already made in first aid instruction will be carried even further by the publication of these books.

The textbook on home hygiene and care of the sick has been published under the auspices of the Red Cross in order to enable women to prevent much of the sickness arising in the home and community. It is the purpose of this book to make women understand some of the general laws of health, to recognize symptoms in their early stages, to guard against communicable disease, and to render intelligent care to the sick. The section dealing with the care of babies is of particular value. As nearly every woman is called upon to assist in the care of the sick at some time during her life, this book should find its way into every American home.

A Text-book of Physiology. By William H. Howell. Seventh Edition. Philadelphia: The W. B. Saunders Company. 1918. 1059 pages. Price, $5.00.

Previous editions of this book have been reviewed in the Journal. It has easily held its place for more than a decade as the most symmetrical and inclusive treatise upon the subject by an American author. Inasmuch as this is widely recognized there is little to be said of the current edition beyond the statement that the revision has been careful and extensive. Doctor Howell has a singularly judicial mind; one would find it difficult to discover in his book which are the matters that have chiefly claimed his own attention and to which side he inclines in controversy. His style is clear and agreeable.

Physiology is showing a divisive tendency. For some students the absorbing interest is in the coördination of complex systems. For others it is in the cell—in the reactions of protoplasm. The pursuit of the science in the second case leads into the realm of physical chemistry. Howell's text, on the whole, emphasizes the highly organized mechanism rather than the elementary substance and may, in consequence be termed medical rather than biological. It is contrasted in this respect with such a work as Bayliss' "Principles of General Physiology."

The author's course in citing authorities is to be commended. The number of references is not so great as to be confusing and those which are included open sources of valuable information. The illustrations are numerous and well chosen.

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MASSACHUSETTS PHYSICIANS IN THE WAR.

In this issue is published a list of the Massachusetts physicians who volunteered in the service of their country during the World War. The list was prepared from the card catalogue that was made by the volunteer secretary of the Massachusetts State Committee, Council of National Defense, Medical Section, and her corps of helpers, and was checked by the official files in the offices of the surgeon-generals of the Army and Navy, and the Red Cross at Washington. The total number of names is 1,700. The Directory of the American Medical Association, published in the spring of 1918, gives the total number of physicians in Massachusetts as 5,494. Therefore, of the physicians of this State who offered their services to the Government in this time of need, 30.9 per cent. were accepted. If we deduct the 132 names of those who were offered commissions in the medical corps but were not called to service, 1,568 men actually served, or 28.7 per cent. of all in the State. It is to be borne in mind that the entire personnel of physicians in the State includes the women, the disabled for active duty, the retired from practice, and those too old for military service. Of those in the printed list 19 died while in the service. The list does not include those physicians who labored on the draft boards, the specialists who acted as contract surgeons, the members of the state and city boards of health, the indispensable members of the faculties of the medical schools, nor those who, staying at home, looked after the practices and the families of their brothers who were afield. The showing is most creditable to the patriotism of the medical profession of the Bay State.

◆

VENEREAL DISEASE CONTROL.

In order to secure the success of the campaign for the control of venereal diseases in the United States, the coöperation of medical, dental, and pharmaceutical schools, the hospitals, clinics, and the training schools for nurses is important and necessary. The Bureau of Public Health Service has announced in a circular letter that this may be accomplished by calling a convocation of faculty, staff, and student body, by giving exhibitions of educational photo drama films, by arranging meetings to be addressed by the president of the State Board of Health, the local, municipal or county health officer, the Public Health Service representative appointed to the State, and the United States Public Health Surgeons in charge of the clinics established in the State; and by complete permanent exhibits of official literature issued by the United States Public Health Service and State boards of health.

The work already accomplished in venereal disease control has been considerable. When the Chamberlain-Kahn Act created the Division of Venereal Diseases in the United States Public Health Service and the great work of venereal disease control was inaugurated, the plan of procedure formulated was grouped under three headings, as follows:—

1. Medical measures.
2. Law-enforcement measures.
3. Educational measures.

The educational measures include the dissemination of information by leaflets, lectures, exhibits, moving pictures, stereopticon views, and other means, among industrial plants, commercial institutions, clubs, libraries, community centers, schools, churches, the home, and every walk of life.

The law-enforcement measures include encouragement of the closing of restricted districts; stimulating enforcement by State and municipal officials of laws and ordinances directed against prostitution in all its phases, the establishment and management of institutions for rehabilitation of venereally infected persons, and the commitment to institutions of venereally infected feeble-minded persons; urging the adoption and enforcement of laws and ordinances compelling the reporting of the venereal diseases, the prohibiting of quack advertising, and the sale of venereal disease nostrums; and other measures designed to prevent the spread of the venereal diseases.

The medical measures include the establishing of clinics; securing hospital facilities for venereally infected persons; making available laboratory facilities for the scientific diagnosis of venereal diseases; securing wide distribution of arsphenamine or similar products; obtaining the support of the entire medical profession by the reporting of their cases to the State Board of Health and the treating of venereally infected persons, in accordance with the best modern methods; securing the coöperation of druggists in refusing to dispense venereal nostrums and directing prospective purchasers of such remedies to venereal disease clinics, or reputable physicians; securing the coöperation of dentists and nurses in their respective fields of practice; and enlisting the interest and services of all medical, dental, and pharmaceutical schools, societies, and journals. Appeals have been made to newspapers and druggists, and the spirit of willingness to coöperate has been gratifying.

At the first of a series of educational and official film exhibitions for medical schools and members of the attending and nursing staffs of hospitals, held under the direction of the Division of Venereal Disease at Washington for the benefit of the faculties and student bodies of the Medical and Dental Departments of Georgetown University, the venereal disease problem in civil life was reviewed. Dean George M. Kober, after commenting upon the progress of hygiene, is reported to have included the following remarks in his address:

> Of 274,611 patients treated in the city hospitals of Washington there were no less than 27,947 cases of venereal diseases.
>
> In 1909 the American Public Health Association, appreciating the gravity of the situation, appointed a committee to consider and report upon the best method of educating the public with respect to the communicability and prevention of gonorrhea and syphilis.
>
> Our committee had no accurate statistical data as to the prevalence of these diseases in civil life apart from the statistics collected for the President's Homes Commission. We knew in a general way that fully 80 per cent. of all the operations for inflammatory diseases peculiar to women are of gonorrheal origin; that the same germ was responsible for blindness in 15,000 of the 50,000 blind persons in the United States; that Dr. Cole, in Osler's Modern Medicine, cited 19 epidemics of gonorrhea, with 660 cases among children in various hospitals; that Dr. Holt had observed 273 cases of gonorrhea in the babies' hospitals in New York, and that Neisser, the discoverer of the germ, estimates that more than 45 per cent. of all involuntary childless marriages are due to this cause.
>
> We also know that syphilis was responsible for 42 per cent. of abortions and miscarriages, and that from 60 to 86 per cent. of the offspring of syphilitics die before, or shortly after birth, and those who survive are subject to physical and mental defects; that it was the cause of over 90 per cent. of the cases of locomotor ataxia, and a prolific cause of apoplexy, paralysis, softening of the brain, insanity, diseases of the heart, blood vessels, and other vital organs.

Dr. Kober reported the following statistics, which show the total admission rate of venereal diseases per thousand in our own and in foreign armies:

	Year	Syphilis	Chancroid	Gonorrhea	Total Venereal
U. S. Army	1908	30.45	30.77	135.77	196.99
U. S. Navy	1909	26.49	28.23	105.11	159.8
Japanese Navy ..	1907	....	....	.....	139.8
British Navy	1908	37.46	17.87	67.16	122.5
British Army	1908	35.1	28.23	40.7	104.0
Spanish Army ...	1907	11.6	27.84	28.4	67.8
German Navy ...	1908	17.3	9.5	36.4	63.2
Russian Army ...	1907	17.7	12.2	30.2	60.1
Austrian Army ..	1907	16.0	10.1	28.1	54.2
Japanese Army ..	1907	10.1	10.4	17.1	37.6
Belgian Army ...	1907	6.2	....	19.99	26.2
Dutch Army	1905	4.6	....	17.0	21.6
Prussian Army ..	1907	4.4	2.1	12.2	18.7
Bavarian Army..	1907	3.3	0.97	10.9	15.2

The present war revealed the fact that the total admission rate for venereal diseases per thousand men in five National Army camps,—Dix, Lee, Upton, Meade, and Pike,—was 337.2. Of the 45,000 cases reported between March 29 and November 15, 1918, nearly 96 per cent. had contracted the disease before enlistment.

In explaining the Government's program, Assistant Surgeon-General C. C. Pierce commented upon the importance of the Chamberlain-Kahn Bill, and is reported to have made the following statements:

> Prior to the passage of this Act the United States Public Health Service, realizing the urgent necessity for control measures for venereal diseases, had opened negotiations with the various State Boards of Health, with a view of having established in each state a bureau of venereal diseases, to have general supervision over all phases of this important work. The plan was to have an officer of the Public Health Service stationed in each of the various States, for the purpose of coöperating with the State Board of Health in establishing a fourfold work, as follows:
>
> (*a*) Securing the reporting of venereal infections, in accordance with the State laws or State Board of Health regulations.
>
> (*b*) Carrying on repressive measures, including the isolation and treatment in detention hospitals of infected persons who are unable or unwilling to take the necessary measures to prevent themselves from becoming a menace to others.
>
> (*c*) Establishment of free clinics for the treatment of venereal diseases, and extending the facilities for early diagnosis and treatment by providing proper laboratories to make exact diagnoses and examinations to determine when patients might be released as noninfectious.
>
> (*d*) To carry on a general educational campaign to inform the public, as well as the infected individuals, regarding the nature of these diseases and the manner in which they are spread.
>
> It is gratifying to be able to say that 44 of the states are now carrying on this standard program for venereal-disease control. While many persons have heartily entered into this work on account of the patriotic appeal made to them that it was a necessary war measure, they should now realize that it is just as necessary in time of peace. The great problems of reconstruction cannot be handled by our people unless the entire citizenship of the country is maintained at the highest standard of efficiency. The prevalence of venereal infections throughout the whole fabric of civilization is so enormous that there are no other causes that produce such widespread misery, suffering, loss of efficiency, and damage to posterity as the venereal diseases. Therefore, now that the world has been made safe for democracy, let us likewise make it safe for posterity.

* * *

WORLD-WIDE COÖRDINATION OF RED CROSS ACTIVITIES.

The proposed world-wide coördination of Red Cross activities has been considered recently at the International Conference of Red Cross Societies. This conference was called at the request of the Red Cross societies of the United States, France, Great Britain, Italy, and Japan. The original Geneva convention was designed primarily to guarantee neutrality to those actually engaged in the care of sick and wounded combatants. The war has clearly shown, however, that modern warfare extends beyond the limits of the battlefield into the homes of the nations involved, to the refugees and civilians who have suffered at the hands of the combatants. The Red Cross, signifying as it does neutrality and sympathy between nations, races, religions, and classes, is peculiarly adapted to the relieving of the suffering of humanity, through the study of human disease, and by promoting measures for public health and sanitation, child welfare, training of nurses, and the care and prevention of tuberculosis, venereal diseases, malaria, and other chronic or infectious diseases.

At the conference at Cannes, the past experience of nations has been reviewed carefully, and it has been planned that the international organization at Geneva will continue to formulate and propose to individual Red Cross societies lines of Red Cross effort in the interest of humanity. The following statement by Henry P. Davidson outlines the purpose of this plan:

> The conception involves not merely efforts to relieve human suffering but to prevent it; not alone the suffering of one people but an attempt to arouse all peoples to a sense of their responsibility for the welfare of their fellow-beings throughout the world.
>
> In brief, the plan contemplates the formation of what will be, in effect, an association in the interest of all humanity.
>
> It is a program, both ideal and practical; ideal in that its supreme aim is humanity; practical in that it seeks means and measures to meet the tragic crises which are daily recurrent in the lives of all mankind.

Surely, the operation of such a plan would develop a new fraternity and sympathy among the peoples. By so doing, an important contribution will have been made toward the success of the League of Nations, and this present plan should be viewed as a vital factor in the larger undertaking.

The League of Nations aims to hold all peoples together in an effort to avoid war and to insure freedom; this particular plan aims at devising a procedure whereby all peoples may coöperate actively in promoting the health and happiness of one another.

◆

MEDICINE AND LETTERS.

Many instances of a close bond between British letters and medicine have been reviewed in a recent issue of *The British Medical Journal.* Sir Thomas Browne, Tobias Smollett, Oliver Goldsmith, and John Keats are mentioned as notable examples of men who have achieved fame as writers and who yet can be claimed by the medical profession. Sir Thomas Browne practised medicine for many years, first in Oxfordshire and later at Norwich. It is interesting to know that Smollett's writings have been somewhat influenced by his service as surgeon's mate in H. M. S *Cumberland,* and that he practised for a while after leaving the sea. It may not be generally known that Keats served four years as an apprentice at Edmonton, studied at the United Hospitals, became a Licentiate at the Society of Apothecaries in July, 1816, and practised surgery for a short time. Another British author to have received a medical degree is Goldsmith, who is said to have graduated in medicine either at Louvain or Padua, and later began an unsuccessful practice in Southwark.

At the present time, St. Bartholomew's Hospital may claim the poet laureate. The Regius Professor of Medicine at Oxford and Cambridge has contributed to English letters. Conan Doyle, de Vere Stacpoole, and Somerset Maughan left the medical profession to enter upon careers as fiction writers and playwrights. Dr. Andrew Balfour, now devoting himself to the study of the parasitic diseases of the tropics, previously earned a reputation as a historical novelist. Other physicians, among them, Dr. Ronald Macfie and Dr. Habberton Lulham, have published volumes of verse. These men are by no means all who have been actively engaged in the practice of medicine and have also contributed worthy prose and verse to English literature.

◆

MEDICAL NOTES.

Debarkation Hospital Number 5.—The following information about Debarkation Hospital Number 5, New York City, has been issued by the American Red Cross, and describes the organization of one of the most efficient of Army hospitals: No less than fifteen separate departments are maintained in working order, and through its Social Service Department the Red Cross takes personal charge of each wounded soldier who arrives, and until he leaves, his comfort is assured by a Red Cross worker.

In the Department of Patients' Records, a careful record of each man is taken and hung up in the ward, as well as filed for reference. The Department of Casualty Investigation keeps a special card file of patients by regiments, so that persons seeking information about missing men can be put in touch with members of his unit. Inquiries are kept in a permanent file and followed up with each new group of patients received.

Through the Department of Fraternities and Organizations, arrangements are made for patients to attend meetings of their various organizations. They are also put in touch with representatives of their State and Regimental Organizations, a list of the headquarters of which is at hand.

The Business Department takes care of the following Banking Facilities through the Empire Trust Company: The cashing of money orders, the exchange of foreign money, emergency loans to patients, the compilation of regular reports to all departments of the A.R.C., the supervision of supplies and storeroom, the shipment of packages by express and parcel post, and the supervision of telegrams for patients.

Entertainments are given every evening in the big auditorium on the first floor. This work in its psychological effect is recognized as being as important on the mental plane as medical and surgical work are on the physical. To help ward off the first shock of morbidness and introspection, which is inevitable to the man who has come out of the war's inferno, is of fundamental importance. Every effort is made to rehabilitate these men, both physically and mentally.

On each of the twelve floors, some of which are medical and others surgical, there is a Red Cross Executive and three ward workers. Each floor is provided by the Red Cross with a recreation room. In it is a piano, a victrola, a billiard table, a library, newspapers, and magazines galore.

The actual capacity is 4000. Incomings and evacuations are going on constantly. More than 1000 wounded men are received during each week and sometimes more than 500 arrive in a single day.

BOSTON AND MASSACHUSETTS.

Chelsea Health Report.—The annual report of the Board of Health of Chelsea for the year 1918 reviews the epidemic of influenza in that city. The first cases appeared in the early part of September and increased steadily until the situation became grave about the middle of September. Four physicians were obtained from the United States Public Health Service to assist in controlling the disease; a nursing force was organized, and one floor of the Frost Hospital was given over to the care of influenza cases. Toward the latter part of October, the epidemic subsided. Influenza was made a reportable disease on October 4; the reports after that date record 684 cases in October, 20 in November, and 327 in December. It is believed by the health authorities that there were from 9,000 to 10,000 cases in the city. The majority of cases were among persons between the ages of eighteen and thirty years. The total number of influenza and pneumonia deaths during the epidemic was 179.

During the year, the Chelsea Board of Health has assisted the Child Welfare League, which was organized in June, 1918, for the purpose of developing infant hygiene work.

There have been reported during 1918, 83 cases of diphtheria, 59 of scarlet fever, 506 of measles, 222 of lobar pneumonia, pulmonary tuberculosis 108, typhoid fever 15. It is interesting to observe that during the last third of the year, at the time of the influenza epidemic, the number of diseases reported was considerably less than for the corresponding months in 1917. There was a total number of 1070 deaths, giving a death rate of 21 for 1000 inhabitants.

Brookline's Infant Mortality Rate.—A survey made by the New York Milk Committee has shown that Brookline, with its infant mortality rate only 35.4 per thousand babies born, merits the distinction of having the lowest infant mortality rate of all the towns in the United States. Brookline had the lowest rate from 1906 to 1910, when its record was beaten by that of La Cross, Wisconsin. In 1916, the honor of holding first place again went to Brookline, to be given to Pasadena, California, the following year.

Among cities having a population of more than 100,000, Fall River, with a rating of 161.3, had the highest infant mortality rate for 1918. New Bedford, among cities of 50,000 to 100,000 population, and Chicopee, of cities of less than 50,000 population, lost more infants during the first year after birth than any other communities in the country. Among large cities, San Francisco holds first place, with a rate of 57.2 per 1000, while Reading, Pennsylvania, had the highest record with a rate of 202.9 infants lost per thousand born. The rate for Boston is 114.9, slightly over the average infant death rate for the country, which is 104. New York's baby death rate was 92 per 1000, a figure slightly higher than its record for the previous year.

There were 2,700,000 babies born in the United States during 1918, probably the largest number in the history of the country. This figure shows an increase over the previous year of 27,000. The general infant mortality rate, based on reports from cities comprising 26 per cent. of the population, increased from 97.5 per 1000 births to 104.1.

Mortality Rates of Lawrence.—A report recently issued by the United States Department of Health shows that Lawrence has the lowest death rate among textile cities, and stands third in the list of cities of 100,000 or more population. Only three country towns in Massachusetts have lower rates than Lawrence, and this city leads all the municipalities of the Merrimack valley.

The death rate among the children of Lawrence has been greatly decreased under the administration of the child welfare department. During the first six months of 1918, there were

366 deaths of children under ten years of age, while only 199 have died during the same period this year. Of children under two years of age, 280 died during the first half of last year, while only 147 of that age died this year during the same time. The child welfare department's four nurses and two assistants have cared for more than 2600 babies during the year and made nearly 10,000 visits to the homes of the children. More than 1500 babies attended the free clinics, and more than 2300 are being cared for now. Nurses visit the homes of new born babies, and care also for children referred to them by doctors, hospitals, social agencies, and neighbors. There are three child-feeding and child-care clinics each week.

Children in the primary grades are examined by the nurses and the school physician, and follow-up work is carried on to see that recommendations are heeded. Housing conditions are investigated, and wherever it is possible, families living under conditions which menace the health of the children are assisted in finding more sanitary dwellings.

RETURN OF MAJOR-GENERAL GORGAS.—Major-General William C. Gorgas, director of the yellow fever work of the International Health Board, has recently returned from South America, where he went to try to determine the seed beds of yellow fever, in order to institute systematic measures to destroy the disease at its source.

NEW ENGLAND NOTES.

AMERICAN MEMORIAL HOSPITAL AT RHEIMS.—It has been announced by the New England Branch of the American Fund for French Wounded that seventy-eight beds have been endowed and that twenty-four more are needed to complete the desired number. Twenty-seven of the endowed beds are credited to the New England district. This branch has also received the amount required for the sterilizing equipment and for one quiet room, besides pledges for the operating room and four more quiet rooms. Of the six thousand dollars needed to endow a bed in memory of the men from New England who gave their lives in France, three thousand eight hundred and twelve dollars and twenty-five cents is still lacking. Over five thousand eight hundred dollars is needed to fulfill the pledges of the New England Branch for the kitchen fund, over four thousand for the roof garden fund, and ten thousand dollars for the laundry and the convalescent sunporch. Contributions for any part of the hospital, for the general fund, or for additional bed endowments, may be sent to Kidder, Peabody and Company.

Since June 1, the American Memorial Hospital has been operated by the American Fund for French Wounded and the Woman's Overseas Hospitals. The city of Rheims has loaned for the use of this temporary hospital the remains of the Hospice for Incurables of St. Marcoul, founded in 1645. Its record from June 2 to June 8 shows that one hundred and ten cases were received in the dental clinic, there were thirty-four out-practice calls, sixty-one clinic cases, seventeen admissions to the hospital, sixty-two families aided in various ways, and nearly eight hundred and fifty articles distributed from the vestiaire.

WAR RELIEF FUNDS.—The principal New England War Relief funds have reached the following amounts:

French Orphanage fund ..	$506,965.73
Italian fund	298,293.42
Russian Refugee fund	90,097.55

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Obituaries.

ABRAHAM JACOBI, M.D.

The death of Dr. Abraham Jacobi on July 10, at his home on Lake George, is deeply regretted by members of the profession. Dr. Jacobi was born at Hartum, Westphalia, Germany, in 1830, and began his medical studies at the age of seventeen. He attended the gymnasium at Minden, and the universities of Griefswald, Göttingen, and Bonn. He joined the revolution of 1848, and was for a time imprisoned. He came to America in 1853 and established a practice in the tenement district of New York City, specializing in the diseases of babies and children.

Dr. Jacobi had been honored by many American and foreign medical societies and universities. The University of Berlin offered him the professorship of pediatrics, which he declined. He held similar professorships in the New York Medical College and the College of Physicians and Surgeons from 1870 to 1902, when he was made professor emeritus. He held also many hospital appointments. Degrees were conferred upon him by New York University, Harvard, Yale, Columbia, and Michigan universities. For sixty years Dr. Jacobi was a member of the New York Academy of Medicine, serving for a time as its president. For more than fifty years he served in an official position at the Mount Sinai Hospital in New York. At the age of eighty-two, he was elected president of the American Medical Association. Dr. Jacobi had contributed several volumes to medical literature.

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JOHN F. DOWSLEY, D.M.D.

Dr. John F. Dowsley died recently at Newton of heart disease, as he was on his way from his home to the railroad station at Newton Centre. Dr. Dowsley was born in St. John's, N.F., 56 years ago, and came to this country at the age of 14. He was a graduate of the Baltimore College of Dental Surgery, and had practised dentistry in Boston for the past 35 years. He had served as trustee of the Forsyth Dental Infirmary, as president of the Massachusetts State Dental Society, as chairman for 20 years of the State Board of Registration in Dentistry, and for 27 years as president of the Massachusetts Board of Dental Examiners. In 1914, Dr. Dowsley went to London as a delegate of the National Dental Association of America. It was due to the suggestion of Dr. Dowsley that the entire Forsyth Dental Infirmary was given over to the State for free dental work for the soldiers on the way to Mexico in 1916 and later in the World War.

Dr. Dowsley was a member of the Boston Art Club and of the Boston Athletic Association. He had lived in Newton Centre for about three months, where he moved from Roxbury. He had been married twice, and is survived by two daughters and one son.

The death of Dr. Dowsley is deeply regretted, and is counted a distinct loss to the dental profession, in which he had attained an eminent position.

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JOHN B. MORAN, M.D.

Dr. John B. Moran died after a long illness on July 12, at his home in Allston, at the age of 80 years. He was born at St. John, N. B., on August 3, 1838. He entered the Harvard Medical School in 1861, but left to serve in the Civil War. After serving as sanitary surgeon in the Peninsular campaign in 1862, he returned to continue his studies and received his medical degree in 1864. He then studied for two years in Vienna, Prague, Berlin, and Paris, and returned to Boston and engaged in mercantile life for five years.

Dr. Moran began practising in the South End of Boston and in Roxbury in 1871, which he continued until ten years ago. He was a charter member of the Boston Medical Library and the Boston Athletic Association, a member of the American Medical Asociation and the Boylston Medical Society, and a fellow in the Massachusetts Medical Society. In 1885 he was elected the first instructor of hygiene in the Boston schools, and he served for a period of nine years on the Boston School Committee. Dr. Moran served as president of the Catholic Union of Boston in the years 1882, 1883, and 1884, and as president of the Charitable Irish Society in 1886 and 1887. He is survived by his widow, one daughter, and three sons, one of whom is Dr. Charles L. Moran, Lieutenant-Commander, M. C., U. S. N., Retired.

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Miscellany.

RESUMÉ OF COMMUNICABLE DISEASES FOR JUNE, 1919.

General Prevalence.

For the month of June there were 5,716 cases of communicable diseases reported as compared with 9,048 in 1918 and 10,301 in 1917. This is also a decrease of 1,760 cases from the previous month. The case rate per 100,000 population for June was 145.8 as compared with 230.3 for June, 1918.

Diphtheria just reached the endemic index for the month, while scarlet fever and whooping cough exceeded it. Measles and typhoid were gratifyingly low.

The prevalence for the first six months of 1919 (January to July) for the more common diseases was:

Measles	4,983
Gonorrhea	4,730
Tuberculosis, pulmonary	4,054
Scarlet Fever	3,856
Diphtheria	3,653
Pneumonia, lobar	3,308
Whooping Cough	2,517
Syphilis	2,160
Mumps	1,547
Tuberculosis, other forms	411
Typhoid Fever	302
Epidemic Cerebrospinal Meningitis	150

Diphtheria.—As has been said, diphtheria just reached the endemic index for the month, with 483 cases, though this is a decrease from last month (559 cases). During June of last year 473 cases were reported.

Lobar Pneumonia.—It is of considerable interest to note that, in spite of the prevalence of influenza, during the first few months of this year, the number of lobar pneumonia cases reported so far this year is 3,308 as compared with 4,335 for the same period last year. Probably the explanation is that the influenza-pneumonias were generally called bronchopneumonias, which was probably correct, and as such were not reportable.

Tuberculosis.—Thus far this year pulmonary tuberculosis has shown a slight decrease, as well as other forms of tuberculosis reported. It is a great pity that more use is not made of the clinical facilities throughout our State, organized exclusively for the diagnosis of tuberculosis.

Scarlet Fever.—Although the 492 cases reported exceeds the endemic index for this month, it is over one-third less than last month, when 805 cases were reported. The incidence per 100,000 was 12.3 (June, 1919), 20.5 (May, 1919), and 7.4 (June, 1918).

Whooping Cough.—The other common disease to exceed its monthly endemic index was whooping cough, 467 cases being reported; but this was only a little more than half the reported cases for the same period last year. The incidence per 100,000 was 11.7 (June, 1919) and 21.1 (June, 1918).

Measles.—The decrease in reported cases from last year, which was noted in May, still continues, 891 cases being reported in June this year as compared with 3,663 for June last year, and 3,832 for June, 1917. The incidence per 100,000 was 22.3 (June, 1919), 93.4 (June, 1918), and 99.6 (June, 1917).

Typhoid Fever.—The number of reported cases of typhoid fever for June was most satisfyingly low, being only three more than were reported in May. The Lawrence situation, which gave trouble earlier in the year, seems to be well in hand now. The incidence per 100,000 was 1.1 (June, 1919), 1.7 (June, 1918), and 2.7 (June, 1917).

Venereal Diseases.—This month the reported cases of gonorrhea showed a slight increase, and syphilis a considerable decrease from last month, 842 new cases of gonorrhea and 266 cases of syphilis being reported. Still the incidence is probably of little significance as to the prevalence of the disease in the various communities but rather as to the prevalence of reporting for treatment.

OUTBREAKS.

There were no outbreaks of any considerable significance. Various localities exceeded the endemic indices, and in practically every case it was traced to mild cases that were not diagnosed, and therefore not quarantined, frequently because no physician was called.

RARE DISEASES.

Anterior Poliomyelitis was reported from Belmont, 1; Everett, 1; Melrose, 1; total, 3.

Dog-bite requiring anti-rabic treatment was reported from Brockton, 1; Dighton, 1; Fall River, 1; Lawrence, 1; Lowell, 3; Worcester, 1; total, 8.

Dysentery was reported from North Adams, 1.

Epidemic Cerebrospinal Meningitis was reported from Arlington, 1; Boston, 6; Cambridge, 1; Hudson, 1; Lawrence, 1; Leominster, 1; Lowell, 2; Malden, 2; Marblehead, 1; Norwell, 1; Provincetown, 2; Quincy, 2 Rockland, 2; Salem, 1; Weymouth, 1; total, 25.

Malaria was reported from Boston, 1; Dedham, 1; Franklin, 1; Haverhill, 1; Lowell, 1; Needham, 1; Northbridge, 1; Wellesley, 1; total, 8.

Pellagra was reported from Danvers, 1; Somerville, 1; Worcester, 1; total, 3.

Rabies was reported from Fall River, 1.

Septic Sore Throat was reported from Boston, 1; Brookline, 1; Lowell, 1; Newburyport, 1; Somerville, 1; total, 5.

Smallpox was reported from Belmont, 1; Boston, 3; Framingham, 1; Gloucester, 2; Lowell, 1; Ludlow, 3; total, 11.

Tetanus was reported from Dedham, 1.

Trachoma was reported from Boston, 3; Lawrence, 1; Newton, 1; total, 5.

Trichinosis was reported from Boston, 1.

Correspondence.

MASSACHUSETTS STATE DEPARTMENT OF HEALTH EXAMINATION.

State Department of Health,
Boston, July 18, 1919.

Mr. Editor:—

The Massachusetts State Department of Health recently announced an examination to be held to establish an eligible list for the positions of District Health Officer and Male Epidemiologist in the subdivision of venereal diseases. This examination, which was to have been held on July 14 and 15, has been postponed to a date to be announced later.

The subjects on which candidates will be examined are: preventive medicine, communicable diseases, hygiene, sanitation, vital statistics, bacteriology and pathology.

Graduates from recognized medical schools, between the ages of twenty-three and forty, will be eligible for examination. Candidates over thirty-five must have had at least two years' experience in public health work. Persons who have had five years' experience and are not over forty years of age, will be eligible even if they are not graduates from medical schools. Preference will be given to citizens of Massachusetts.

By direction of the Commissioner of Health.

Very truly yours
B. W. Carey, *Director*,
Division of Communicable Diseases.

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RECENT DEATHS.

Dr. John F. Dowsley died recently while hurrying from his home in Newton to the railroad station. He was born in St. John's, N. F., fifty-six years ago. He was a graduate of Baltimore College of Dental Surgery and established his practice in Boston. He had been a trustee of the Forsyth Dental Infirmary, and president of the Massachusetts State Dental Society and the National Association of Dental Examiners.

Dr. E. Jeanette Gooding died recently at her home in Braintree. Dr. Gooding was born in Boston on April 15, 1831. She was educated at the Charlestown Seminary and the Boston University Medical School, receiving her medical degree in 1877. She began practicing in Boston and continued until five years ago. In 1907 she moved to Wollaston, where she made her home.

Dr. Edward Cowles, M.D., a retired Fellow of the Massachusetts Medical Society, died at his home in Plymouth, July 25, 1919, aged 82 years.

Dr. Henri Hallopeau, physician to the Saint-Louis Hospital, died recently at the age of seventy-eight years. He was born in Paris in 1842, received his medical degree in 1871, and was appointed physician to the Hospital in 1877. He became agrégé in 1878, and was elected a member of the Académie de Médecine in 1893. In 1884 he published a treatise on general pathology, which was translated into Spanish, Greek, and Turkish, and he was the author of more than eight hundred publications, ranging over the whole field of dermatology. He retired from Saint-Louis Hospital in 1907 and became consulting physician to the Maison Départmentale of Nanterre, where he continued to work until 1918.

Professor Albert Döderlein, who was one of the hostages at Munich, was shot during the recent political disturbances. He was born in 1860, received his medical degree in 1884, and, after holding the chair of obstetrics and gynecology in the Universities of Groningen and Tübingen, went to Munich. He had published a number of works on puerperal fever and other gynecological subjects.